

BURMA GAZETTEER

PEGU DISTRICT

VOLUME A

COMPILED BY
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SETTLEMENT OFFICER,



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PREFACE.

CHAPTER II was written by Mr. J. A. Stewart, I.C.S. In Chapter V notes written by Mr. F. Linnell on the Pegu Forest Division and by Mr. F. W. Collings on the Nyaunglebin Forest Division have been inserted practically as they stood. Notes on some of the Public Works have been furnished by Mr. B. B. Scott, Mr. C. E. Rushton, and Mr. W. R. Wells. Chapter XII was furnished by Mr. S. W. Cocks. The remainder was written by Mr. O. M. Rees, I.C.S., with assistance from the district officers in furnishing information. In Chapter I notes on the fauna furnished by Mr. C. W. Allan have been used.

A. J. PAGE,

Settlement Officer, No. 6 Party.

18th September 1915.

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BURMA GAZETTEER.

PEGU DISTRICT

VOLUME A.

CHAPTER I.

Physical Description.

The Pegu district of the Pegu division was formed in 1883 by General Department Notification 56 of January 31st, 1883, by taking the townships of Kyauktan, Paunglin (now Hlègu), Pegu and Pagandaung (subsequently called Thabyegan) from Hanthawaddy district.

Constitu-
tion of the
district.

Minor changes in the boundary between Hanthawaddy and Pegu in January 1886 by General Department Notification 70 of February 23rd, 1886, by which the Yetho and Bala circles were transferred to Hanthawaddy and *kzwin*s 15, 16, 17 and 18 of Sitpin circle were transferred to Pegu.

Changes
in its
composi-
tion.

By General Department Notification 30 of July 2nd, 1895, the Pyuntaza subdivision and township and so much of the Kwindala circle of Shwegyin township as lay west of the Sittang (about two-thirds of the circle) were transferred from the then Shwegyin district of the Tenasserim division to Pegu, and Kyauktan and Thabyegan were returned to Hanthawaddy.

Milaunggôn island formed by the Sittang making a short cut on the East, was transferred from Toungoo district by General Department Notification 265 of August 3rd, 1907.

By General Department Notification 63 of February 17th, 1912, the Hlègu township except 13 village-tracts comprising some 131 square miles, transferred to Kawa township, was transferred to the newly constituted Insein district.

Part of the Thatôn district cut off by the new channel of the Sittang will probably be made over to Pegu.

In 1883, the district consisted of two subdivisions, Pegu, with two townships, Pegu and Paunglin, and Kyauktan, with two townships, Kyauktan and Pagandaung.

Internal
changes.

Pegu District.

By General Department Notification 188 of May 6th, 1884, the Pegu township was divided into the two townships of Kawa and Payagale.

By General Department Notification 134 of June 5th, 1894, the Pagandaung and Paunglin townships were renamed Thabyegan and Hlègu.

At the reconstitution in 1895 the district was divided as follows :—

District.	Subdivision.	Township.
Pegu	Pegu	Payagale. Hlègu. Kawa.
	Pyuntaza ...	Pyuntaza.

By General Department Notification 33 of March 23rd, 1897, a small area of the Pyuntaza township was transferred to Payagale township.

By General Department Notifications 36 of January 14th, 1899, and 7 of January 16th, 1899, the headquarters of the Pyuntaza subdivision and township were transferred to Nyaunglebin, and they were renamed Nyaunglebin.

By General Department Notification 185 of October 7th, 1899, the Nyaunglebin township was divided into the Nyaunglebin and Pyuntaza townships.

By General Department Notifications 210 and 211 of July 26th, 1906, the headquarters of Payagale township were transferred to Pegu and the township renamed Pegu

By General Department Notification 27 of January 21st, 1907, a new Dabein subdivision was formed and the district divided as follows :—

District.	Subdivision.	Township.
Pegu	Pegu	Pegu. Thanatpin.
	Dabein ...	Hlègu. Kawa.
	Nyaunglebin ...	Nyaunglebin. Pyuntaza.

By General Department Notifications 102 and 103 of April 7th, 1909, the headquarters of the Pyuntaza township were transferred to Daik-u and the township renamed Daik-u.

On the transfer of Hlègu to the new Insein district in 1912, the district was finally divided as follows:—

District.	Subdivision.	Township.
Pegu	Pegu	Pegu, Thanatpin. Kawa.
	Nyaunglebin ...	Nyaunglebin. Daik-u.

By General Department Notification 1 of January 5th, 1914, a few village headmen's jurisdictions, some of which were astride the boundary, and the Yitkangyi Fuel Reserve were transferred from the Kawa to the Thanatpin township.

Pegu is separated from the Toungoo district on the north by the Kun stream, which rises in the Yomas and flows east into the Sittang river, and on the east from the Toungoo and Thatôn districts by the Sittang, down to its debouchment into the Gulf of Martaban. The Sittang has recently made a new cut at Alôk,¹ the piece of Thatôn district cut off will probably be transferred to Pegu. On the south it is separated from the Hanthawaddy district by an irregular line westwards from the Gulf of Martaban to the junction of the Kawet chaung and Pegu river. The district boundary then turns north along the Pegu river, which separates it from Insein district to a point near Dabein village. The boundary between Pegu and Insein thence continues north along the valley of the Lagunbyin stream and along the watershed between the Pegu and Pazundaung rivers and along the ridge of the Pegu Yomas till it meets the border of the Tharrawaddy district near the head-waters of the Pegu river. Thence the ridge of the Yomas divides it from Tharrawaddy till the Kun stream is reached.

The district is divided lengthwise into two distinct natural tracts. The western tract consists of the Pegu Yomas and their foothills, coming down to the Rangoon-

Boundaries.

General description.

¹See Chapter XIV under "Thanatpin township."

Mandalay railway, and the eastern of a large plain watered by the Sittang and Pegu rivers. The Yomas, rising to about 2,000 feet, are thickly wooded and picturesque, but feverish and thinly peopled. The forest produce is important, and in the lower valleys some good rice land is found. The plain to the east is almost treeless, is extremely flooded and is unbeautiful, but is, except in the parts completely waterlogged, well peopled and almost fully cultivated with rice.

Rivers.

The Sittang is one of the main rivers of Burma, fed from the hills of Pyinmana, Toungoo and the Shan mountains, and is a broad river throughout its course on the east of the district. In the dry weather however it is not navigable above the confluence of the Shwegyin river except to small boats, and it is a very dangerous river owing to an enormous bore which rushes up from time to time from the Gulf of Martaban. It is continually altering its course and adding to or taking away from the land on either bank. In the main its tendency is to add to this district, and there is no doubt that not many hundred years ago the Gulf of Martaban covered most of the plain south and east of Pegu. At Payagyi north of Pegu numerous bolts and other parts of old warships are found at a depth of about 12 feet, and the people say that they indicate a naval battle there. The accretions have been chiefly in Thanatpin township, where the Sittang and sea have been washing away the Kyaikto side and depositing detritus on the Pegu side. Thus the Sittang continually tends to push its channel eastwards. Numbers of the Kyaikto people washed out have crossed over to the new land. These accretions are probably slowly rising in level, and becoming less flooded. The Thanatpin sandbank area which had only begun to form in 1899 covered some 143 square miles in 1912. Since the Sittang took a new cut at Alók in 1910 this area has begun to erode again, not as might be expected below the cut, but on its eastern side further south. The floods from the Sittang and its western tributaries in the rains are extensive, and present the chief administrative problem for the district, railways, roads, timber floating, and other interests as well as those of agriculture are affected. The bund along the Sittang and the Pagaing bund are partial attempts to deal with this problem, but while protecting some parts they hold up the drainage from others. The Sittang is tidal up to Myitkyo.

The canal connecting the Sittang and Pegu rivers forms one of the distinctive features of the district and is of great economic importance. The growing extent of land flooded by the Thanatpin lake is attributed to the canal.

The Pegu river has a small catchment area, and in the dry weather is only a foot or so deep at Pegu. In the rains it is deep and navigable up to Zaungtu. It is a useful highway as it enters the Rangoon river at Rangoon. It is tidal to Tawa and navigable thus far all the year.

The main tributaries of the Sittang in the Nyaunglebin subdivision are perennial, but navigable only during the monsoon. Some of them give much trouble by changing their channels.

There are several large lakes or swamps; notably at Pynbongyi and Thanatpin, in depressions in the plain. Lakes, islands, etc.

The district has no permanent islands of importance.

Owing to its historical importance the district is well sprinkled with pagodas, many of them large and venerable.

The climate and seasons are those of Lower Burma generally. The rainfall does not vary much from one recording station in the plain to another, but is doubtless much higher up in the hills. It averages about 127 inches, which is higher than at Rangoon. It is usually well distributed throughout the monsoon, but is sometimes wanting in late October and November. In the hot weather the coolest places are on the Gulf of Martaban and lower reaches of the Sittang, where sea breezes are felt. The district seems free from serious earthquakes and cyclones. Floods are the chief calamity. Climate and seasons.

The rocks of the Pegu Yomas, comprising the west of the district, consist of what have been called Pegu groups of beds, and are Miocene in age. The rest of the district is alluvial, the type of alluvium being that common to the whole of the Delta. In the west of the plain where the land is high, laterite exists in large quantities. The alluvium is in two groups, an old alluvium, deeply ploughed into by the present river beds, and a newer alluvium confined to the beds of existing rivers and deposited by their floods. Except in the hills the usual surface conformation is slight sandy elevations or ridges, and hollows of clay or loam. Salty patches—probably marine—are found extensively in the soil of the Pegu subdivision plain. Geology.

The chief game animals are found in the forests of the Yomas. Fauna.

Elephants.—Elephants are plentiful in all the forests and do much damage to crops.

Rhinoceros.—*Rhinoceros Lasiotis*, the small two-horned or Malay rhino is found in the Kadat and Zamayi reserves and in some of the reserves of Nyaunglebin subdivision, but is rare.

Bison.—*Bos* or *Gayoeus Gaurus*. Found in many of the reserves.

Saing.—*Gayoeus* or *Bos Sondaicus*. Found in many of the reserves, especially near Thitnibin Sakan in the Pyinbôn reserve.

Sambur.—The *Rusa* or *Cervus Aristotelis* or *Equinus* is found throughout the jungle.

Thamin.—The *Cervus Eldi* is found in the open Indaing forests, among the marshes in the river valleys and even in the flooded grass *kwins* in the plains. A few years ago they roamed in herds of 100 to 200 in the grass *kwins* along the Pagaing bund, but have been slaughtered by Burman and Eurasian hunters from Rangoon and elsewhere who carried on a regular trade in the flesh.

Dayè.—*Axis* or *Cervus Porcinus*. This deer, generally known as the hog-deer, is found in the flooded grass *kwins* and in the Yitkangyi reserve at the mouth of the Sittang.

Gyi.—The *Cervulus Aureus* or *Muntjac* is plentiful throughout the jungle.

Serow.—The Burmese species of the *Nemorhoedus Bubolina* is found rarely on the higher hills.

Ghooral.—The *Nemorhoedus Goral* is said to exist in the Kadat reserve.

Pig.—*Sus Indicus* is plentiful throughout the jungle and does much damage to crops.

Tiger.—*Felis tigris* is found in most jungles. Tigers do not often take man or cattle, but in the Zamayi reserve in 1899 two tigers killed thirty human beings in one year. Tiger were found in *kaing* jungle even along the Pegu-Sittang canal a generation ago.

Panther.—*Felis Pardus* is found throughout the jungle.

Clouded Leopard.—The *Felis Diardii* has also been shot in the district.

Golden Cat.—The *Felis Timinckii* is very rare but has been seen.

Spotted Cat.—The *Felis Torquata* is also very rare.

Wild Cat.—The *Felis Chaus* is common throughout the jungle.

Leopard Cat.—*Felis Bengalensis* is found.

Palm Civets.—Three varieties are found in the district.

Bears.—The Himalayan bear, *Ursus Torquatus*, is found in the hills and occasionally on the plains, but is not plentiful. The Malayan bear, *Ursus Malayensis*, is more common.

Wild Dog.—*Canis Rutilans* is found in the forests in packs of 3 to 10. They run down deer and even *sazing* and bison.

Mongoose.—Two kinds, ordinary and crab-eating, are found in all fairly open country.

Porcupine.—Common in all forests.

Pangolin.—The pangolin is found in the lower forests.

Monkeys.—The Gibbon does not occur in the district. The Burmese langur (*myauknyo*), the *myaukmyetkwinbyu*, the stunted-tailed monkey and the common Burmese brown monkey are the most common.

Hare.—Hare are apparently not found in the district.

Crocodiles.—Crocodiles are found in pools in the upper reaches of the Pegu river, and in the Sittang. A favourite haunt is a lake at Athawi west of the Sittang bund, where they sometimes take cattle. Probably these are the true "mugger."

Other animals.—The following are also found in the district:—Common grey squirrel, small grey striped squirrel, chestnut squirrel, Malabar squirrel (*linthet*), grey flying squirrel, red flying squirrel, hairy-footed flying squirrel, slow loris, bamboo rat, tree shrew, field rat, house rat, tree rat, otter, several kinds of turtle and tortoise, iguana and other lizards, land crabs.

Birds.—Among the chief game birds found are peafowl, pheasant (silver and others), jungle-fowl (very plentiful), tree partridge, quail, imperial pigeon (two varieties), green pigeon (several varieties), and bronze-winged dove. The francolin, like the hare, is apparently not found. The comb-duck, lesser whistling duck, and cotton teal breed in the district. The larger whistling duck, the pintail, ordinary pochard, a few shoveller, blue-winged or gargeny teal are also found. The grey-duck if it occurs is rare. The Brahminy duck, in spite of its legendary connection with the founding of Pegu, is apparently not found, except perhaps up occasional valleys in the hills.

Fantail and pintail snipe come in from the end of August to October and then begin to go away again, but are found

in several places up to April. They are common in paddy fields and marshes. Painted snipe and golden plover are also found. The Pyinbôngyi and Thanatpin jheels are the best for duck. The Pyinbôngyi jheel covers about 40 square miles.

Fish.—See *Fisheries*.

Vermin.—Swarms of all kinds of insects and vermin abound especially in the rains. Land leeches are very bad. The Russel's viper and cobras are common; so are centipedes and scorpions.

Flora.

The flora in the forests are described under "Forests". Orchids, ferns and creepers abound among the trees. On the border of the plains is a more mixed scrub growth on the laterite ridges, in which bamboos are the most useful trees. This quickly merges into open rice plain, producing little spontaneous growth except grass, of which myeza is the most valued. In the more flooded parts, reeds and *kaing* grass are troublesome. Few trees occur in the plains proper. Those most commonly found are planted kôkko trees and banyans. In the waterways the water hyacinth or Canadian duckweed, known variously as bedaban, pyinhitpin, yehninzibin, etc., is a serious impediment to navigation. In the mouth of the Sittang mangrove forest is found.

CHAPTER II.

History.

Intro- ductory.

In this chapter an attempt will be made to give some account of the history of the portion of the Paunglaung or Sittang valley corresponding roughly to what is now the Pegu district. The materials for such a history are, besides archaeological evidence, the Talaing and Burman chronicles and such information as can be derived from Indian and other foreign sources; *e.g.*, books of travel, geographical works, etc. The contents of chronicles are by this time pretty well known. As regards foreign evidence, there are two causes of embarrassment. In the first place its bulk is very considerable and in the second place it refers as a rule vaguely to Burma or Ramanya in general and seldom definitely to the particular area with which we are concerned; the reader must therefore not expect to find reproduced here all the evidence relating to Ramanya.

which can be collected from foreign sources but only so much of it as has a particular bearing on Pegu.

Even within what may be called historical times, great changes have taken place in the physical configuration of the Paunglaung valley. Ships' cables, etc., found deep in the ground at Kawliya, Taikkala, Payagyi, and other places show that the Gulf of Martaban covered large areas of what is now dry land. The Paunglaung must have followed pretty much its present course, though its channel was of course less defined. Other minor streams such as the Pegu river and the Ngamoyeik or Pazundaung creek were much shorter and lost themselves at the edge of the *Kōn* land.

Indigenous Races.—Very little is definitely known of the inhabitants of the Paunglaung valley in early times. The information is fuller as regards immigrants from India than as regards the indigenous inhabitants, but even that is sufficiently scanty.

Popu-
lation
and indi-
genous
races

There are evidences that in the far distant past the Paunglaung valley was inhabited by a primitive people using flint implements. Axeheads of two types have been found—one chisel-edged ¹ and the other of ordinary shape sharpened on both sides. These axeheads are not infrequently unearthed and are supposed by the people to be thunderbolts. The makers of them were, it is conjectured, of Negrito race and were gradually driven southwards to Malaya or elsewhere by the pressure of bigger and better armed invaders. Too little is known of these people to justify further discussion here.

The other races of whom we hear in early records are—Mon, Karens, Shans and Burmans. Zabeins are not mentioned in any account of the founding of Pegu or of the first dynasty. Burmans or Khames appear in the Mon histories as disputing possession of Pegu with the Mons and Kalas when from their prominence in the middle country we should expect to hear of Pyus.

The Mons have clearly formed the bulk of the population in Pegu and the Paunglaung valley in general since very early times. Like the other races just mentioned they are Mongolians. They are allied in language and possibly in race to the Khmers of Cambodia, the Khasi Hill tribes in Assam, the Munda speaking peoples of Chota Nagpur

¹ Forbes.

and the inhabitants of the islands of Australonesia.¹ The problems raised by their linguistic affinities still await solution. It is generally supposed that the Mon Khmer peoples came to Burma and Cambodia from the north, but when or by what route must still remain uncertain. There are two facts the bearing of which has perhaps hardly been sufficiently considered, the extraordinary dialectical differences in the Mon language as spoken in Burma and Siam at the present day, and the insistence of Talaings on the four-fold or three-fold division of their race (*Mon pon sakao* or *poi sakao*). *Poizakao*, for instance, is the Martaban pronunciation and is similar to that of the Siam Talaings. In Pegu and the Irrawaddy delta these words are pronounced *pi saku*. No one is now able to explain the meaning of the four-fold or three-fold division; considered in conjunction with dialectical differences it perhaps indicates the coalescence in one nationality of several bodies of immigrants who came to Burma either at different times or from different places. This is more probable than that one original language broke up into different dialects within the confined area of the Paunglaung river valley.

The religion of the Mons was animistic. This is clearly proved by the survival of nat worship in Talaing villages more especially purely Talaing districts such as Amherst, to an extent which would shock a Burman. Reference should be made to an exceedingly interesting article on the Klok Dance of the Talaings which appeared in Volume IV, Part II of the Burma Research Society's journal. Without going into unnecessary detail, it may be said that nearly every Talaing village celebrates annually a nat festival similar in character (though of course on a smaller scale) to the orgiastic carnival of Taungbyôn.

In Pegu the Mons appear to have been a people of the plains. All the old Talaing village sites are either on river banks or along the edge of ridges adjoining cultivable land. They have always had a tendency to live in big villages of several hundred houses often a long distance from their fields, rather than to form small hamlets as is the custom in many parts of Burma proper. They thus came readily under the influence of Indian traders and others who, as the position of the great pagodas shows, settled principally on the river or arms of the sea. Their occupations in early times were probably very similar to those they possessed

¹ Anderson, *Peoples of India*, pp. 57 and 59.

at a later date—paddy cultivation, salt-boiling, fishing and kindred industries. They seem to have absorbed or blended with the Indian settlers to such an extent that the Burmans failed to distinguish the two races and described the inhabitants of Ramanya by the name ဝေဇ္ဇိ (Kalingan) or ဝေဇ္ဇိ (Orissan). It is of course possible that Mon and Indian immigration took place simultaneously but on the whole the probability is that the Mons were settled first. The Karens were as now primarily a hill people. There are indications that they were better organized and more powerful than in more recent times. The queen of Thamala, first king of Pegu, was a Karen though an attempt is made by the chronicles to explain away her nationality by insisting on her miraculous birth from a gourd in the hill garden of a Karen. It is curious that a similar attempt is made in the Toungoo history to Burmanize a presumably Karen King named Karinba; he is said to have been so called because he adopted a Karen girl as his daughter.¹ The seven kings who invaded the Talaing kingdoms as recorded in the Kalyani inscription were apparently petty princes or rulers of Karen or other similar communities whose mode of life rendered them less subject to civilising Indian influences.

It is not always clear what is meant by "Shan" as used in the Mon and Burman histories. It seems to include the tribes now known as Shan, the Siamese and possibly even the Cambodians. There is nothing to show that Shans formed a considerable part of the population of Pegu district in early times. Doubtless during the period of the Shan southward migration which drove a wedge between Cambodia and Burma and ultimately led to the formation of the Siamese kingdom, Pegu received a few stragglers from the main bodies. Doubtless, too, there would be occasional Shan incursions from the hills on the east across the Pauwlaung, though there seems to be no evidence of this till the beginning of the 11th century when the king of Pegu called in Anorata's aid against the invading host of Gyun Shans. Shans are not mentioned as permanent residents of the district in Bodawpaya's domesday book. The Burmans are said to have been in Pegu before the arrival of Thamala and his Talaings. They were not difficult to evict. There is nothing to show that they were either numerous or important though from the inevitable

¹ Toungoo Thamaing, p. 80.

southward trend of population in Burma it is a safe assumption that there was always a steady trickle of Burma immigration. As regards the Pyus, of whom we hear nothing, it may be suggested that their power was confined to the Irrawaddy valley and hardly extended across the Yomas to Pegu.

**Foreign
immigra-
tion.**

There is reason to believe that Indian immigrants found their way over the Bay of Bengal to Burma from before the beginning of the Christian era. In his thirteenth edict, in about 255 B.C., Asoka records that he had sent Buddhist missions to Syria, Egypt, Macedonia, Spain, Kyrene, to the country of the Colas and Pandyas of Southern India, Ceylon and other countries bordering on his empire.¹ With greater particularity, the Ceylonese Mahāvamsa specifies the names of the missionaries to each country.² "Occupied by the thero Uttaro the disciple Sono repaired to Sowanabhumi." This visit to Rāmaññadesa, which was also called Suvannabhumi, is mentioned in the Kalyani inscription.³ It is discredited by some authorities but surely on insufficient grounds. (See Smith, *Early Indian History*, page 187.) Asoka's object was clearly to make known the Buddhist religion in all countries within his reach: he found pleasure in conquest by the Dhamma rather than in conquest by the sword and it is incredible that he omitted Burma while including Greece.

There is abundant evidence that Indian colonies existed in Indo-China in the early centuries of the Christian era. Many such are mentioned by Ptolemy. The identification of most of them is a matter of extreme doubt and difficulty. It has been attempted in a volume of nearly a thousand pages by Colonel Gerini, not all of which carry conviction. It is clear however that there was a sea route hugging the Coromandel coast as far as the river Mahanadi dividing Kalinga from Orissa and thence crossing the north end of the Bay of Bengal due east towards Akyab. The route then followed the coast of Burma and Malaya to Cambodia and the lands beyond. Colonies or trading towns were naturally founded along this route and it is occasionally clear from the names of these that their founders were of Indian race. Thus by the time of

¹ Rhys David's *Buddhist India*, p. 298. ² Turnour's edition, p. 74.

³ Page 48.

Ptolemy (150 A.D.) colonies existed in Iabadian (Sumatra or Java) which is described as *krithes nesos*—that is *ḡava-din* or *dvīpa* “the island of millet” and was clearly an early settlement of Indians to whom Sanskrit was familiar. Another very definite piece of evidence of Indian peregrination in the early centuries of the Christian era is quoted in the *Syriam Gazetteer*;—in the third century a Chinese ambassador met an ambassador from India at the Cambodian Court.¹

It is unnecessary, however, in a brief sketch of the history of Pegu to reproduce all the evidence of Indian commercial and colonising activity in Burma and adjoining countries. It still leaves us vague as to the sites of many of the settlements and the original homes of the settlers. Our object must be to determine, if possible, of what race were the Indians who came to Pegu and when they came.

From a cursory study of the published authorities, one might be excused for saying that there is no evidence on these points whatever. Something is known of Prome and Thatôn; of the founding of Pegu not even the Kalyani inscription, erected by a king of Pegu, has a word to say. Thatôn appears to have been settled by Dravidians from Kalinga, for, as Forchhammer points out, the letters of the earliest Talaing inscriptions are almost identical with the Telugu alphabet of the 4th and 5th centuries A.D. Some weight must also be given to the very probable identification of “Talaing” with Kalinga in one of its various forms. There is no reason to dispute the account given in the *Shwemawdaw Thamaing* and in the *Mon histories* that the kingdom of Pegu was founded by a prince of the royal house of Thatôn; but from that account it is clear that before their advent a town was already in existence, and the extreme veneration in which the *Shwemawdaw* pagoda had always been held indicates that it is of great antiquity. The original pagoda may therefore be referred without hesitation to the original Indian settlers who were the pioneers of Buddhism in Burma. Now there is a curious piece of evidence which goes to show that these were in the case of Pegu from Orissa. They would thus be not of pure Dravidian race but of the mixed Mongolo-Dravidian or Bengali type which prevails between Assam

¹ *Architecture Hindoue*, de Beylie, p. 79, quoted p. 16 of *Syriam Gazetteer*.

and the Dravidian country south of the Godaverī. Their language would be the ancestor of present-day Oriya, their religion probably a somewhat purer form of Buddhism than that which prevailed among the Kalingans to the south.¹

The piece of evidence referred to is the occurrence in old Burmese inscriptions, in the Burmese annals and in the Egyins (though nowhere apparently in Talaing records) of the epithet Ussa (ဝုဿာ) applied in particular to Pegu though also occasionally to Ramanya in general. Ussa is obviously an Indian name and obviously the name of a country or people. Of all the ancient Indian place names Grissa is the only one to which it bears any resemblance. Mr. Duroiselle, Government Epigraphist, has carried the identification from conjecture to certainty. He writes: "Ussa is merely the Burmese way according to the genus of the language which, being monosyllabic, has always had the very marked tendency to clip and contract words of foreign origin which it assimilates of pronouncing *Odra-deça*, *Od-rastra*, *Ordeça*, that is the place or country of the Odras or Udras from which the Portuguese have made Orixá and the English Orissa. It is noteworthy that the same country was known to the famous Chinese pilgrim and traveller Hiuen-tsiang (7th century A.D.) by a name very similar to the Burmese form, that is *Utcha* (St. Julien's *Hiouen Tsiang*, pages 184—245 and Cunningham's "Ancient Geography of India," page 510).

The following are some instances of the occurrence of Ussa as an epithet of Pegu and Ramanya:—

(1) In 448 B.E. a governor was appointed by Anorata to ဥဿာပဲရူး (Amarapura Inscription, page 10).

(2) In 469 B.E. Ramanya (ဥဿာတမဉ်တလိင်းပြည်) was devastated by Kyan Sit Tha (Amarapura Inscription, page 18).

(3) The following passage embedded in the Hmannan History page 309 deserves to be quoted in full if only for the ancient vigour of its language. No historian would have troubled to invent the incident it records and it is probably based on a very ancient record of a very early tradition.

အထိန်းသားငရဲမန်ကန်းကိုတည်း။ ဥဿာပဲရူးမြို့ကို ပေးတော်မူ၏။
တရံရေရေအခါ။ မင်းကြီးနှင်ငရဲမန်ကန်းအန်ကဝားကြရာတွင်။ ငရဲမန်ကန်းနိုင်

¹ Anderson, *The Peoples of India*.

လေ၏။မလမ်းပေါက်တ၍ခတ်လေ၏။မင်းစောလူးလည်း။နင်ငါ့အနီတပွဲ
မျှနိုင်သည်ကို။ မလမ်းပေါက်တ၍ ခတ်သည်ကား။ နင်ယောကျ်ား ယုတ်နိုး
ထောင်။နင်စားသောပဲခူးနှင့်ဝန်စားလေတ၍မိန့်တော်မူ၏။ငရမန်ကန်းလည်း။
အကယ်လောဟုမေး၏။ မင်းကြီးလည်းငါတို့မင်း မည်သည်ကား။ မဟုတ်
သောအရာကိုဆိုရာသည်လောဟုမိန့်တော်မူ၏။ ငရမန်ကန်းလည်း ကြံလျက်
နေသောသူဖြစ်၍။ မိမိစားသောပဲခူးသို့သွားလေပြီးသော်။ ရဲမတ်မိုက်ပါဆင်
လုံးခြင်းရင်းရုံးဝ၍ရေအားကြည်းအားနှင့်ပုဂါရုမသို့ချီလာ၏။

We shall have to refer to this passage again in another connection. Here it is sufficient to note that Ussa Pèku is used as if it were the ordinary name of the town.

(4) The references in the Egvins are too numerous to quote. They are in any case of less historical value, inas-much as ဥဿာ tends to be used vaguely and inaccurately as required by the metre.

From the above evidence it seems a fair conclusion that the Oriyas either founded Pegu or formed the most important section of its inhabitants, and that, though probably not the dominant power in Thatôn, they were sufficiently numerous throughout Ramanya as occasionally to give their name to the whole of it. The prominence of the Orissans in Burma is also shown by the application of the name Ukkalaba (another form of Orissa) to the country stretching from Rangoon towards Twante.

The Oriyas and Telugus were not the only Indian immigrants to Ramanya. There is evidence (rather late, it is true) that traders and others came from the ancient lands in the Ganges valley. Thus in the beginning of the 11th century we hear that Dipankara, a Buddhist monk of the northern school, after having studied in Magadha and elsewhere, embarked for Suvannadipa (Thatôn) in a merchant vessel and continued his studies there for twelve years under Acharya Chandra Kirtti, the High Priest, the greatest scholar of his age.²

Forchhammer points out that Talaing literature reveals a knowledge of southern India. From this it can be deduced that the Tamil races also sent representatives to Ramanya.³

² Mindara Shwe 'Ti, pp. 34, 35, 37, 41. Mindara Shwe Ti Na Daw Thwin, pp. 50, 73. Mahauparaza, p. 117. Yodaya Mibaya, p. 224. (May Oung's edition.)

³ *Indian Antiquary*, 1893, pp. 358-9.

⁴ Jardine Prize Essay, p. 25.

From the special prominence of the Orissans and Kalingans, however, it is fair to infer that, at any rate in Pegu and Thatôn, these races contributed the bulk of the immigrants. Their religion was Buddhism, declining in purity with the decline of Buddhism in India, but such as it was they imposed it, and with it to some extent their civilization and language on the more adaptable of the inhabitants—the Mons. Whether their Buddhism was pure or impure it freed them from the fetters of caste and they would inter-marry freely with the native races. Amalgamation and coalescence in one nationality was of course facilitated by their common religion; for even at the present day there is a general feeling that Buddhism constitutes or creates a national bond. It is a safe assumption that wherever the Indians were numerous they were, to begin with, the ruling race—as in Thatôn, Pegu, Rangoon and other early settlements. In remoter places, however, Karen and other chiefs would retain their independence. We hear of a king at Zaungtu, long before the foundation of Pegu but how long he survived or of what race he and his people were is uncertain. We shall not be far wrong if we picture the Paunglaung valley as containing a number of small kingdoms, or rather capitals dominated by the merchant classes mutually independent and as a rule living peacefully together. Weakness on the part of the trading towns would tempt the hill tribes to invasion and plunder. Thus the Kalyani inscription (page 49) mentions that on the occurrence of a famine and pestilence¹ Ramanya was overrun by the armies of the seven kings, who were probably princes of the wilder tribes unconverted to Buddhism. The date of this invasion is not given, but it may be suggested that such incursions were of not infrequent occurrence.

Although we hear of no wars between the Indian settlements there are indications that they did not always live in amity with each other. Pegu according to the traditional account was a colony from Thatôn but does not seem to have been very filial in its attitude or to have had the same interests as the mother city. Thus, as we shall see, there is some reason to believe that Thatôn welcomed the Ohola

¹ Apparently in 902 A.D. *Relations des Voyages et Textes Géographiques*, Ferrand I, p. 64. See also Shwemawdaw Thāmaing, pp. 48 and 49.

invaders who conquered Pegu in the beginning of the 11th century, while the king of Pegu seems to have been in alliance with Anorata, the conqueror of Thatôn

Of the distribution of population at the beginning of the 11th century A.D. something can be inferred from the Hanthawaddy *sittans* and the Shwemawdaw Thamaing coupled with the use of a good map and a knowledge of the Pegu district. In the *sittan* list of the 32 provinces of Hanthawaddy those first constituted were on the banks of the Sittang, in the present Toungoo district. The next provinces to be founded were mostly south of Pegu on either side of the Pegu river—Maw, Dimmè, Zwèbôn, Akarein, Mawlôn, and Lagunbyin. Paunglin and Tidut on the upper reaches of the Ngamoyeik, Zaungtu and Tandawgyi near the head waters of the Pegu river, Merinzara, Kawliya, Baingda and Tônkan on small tributaries of the Paunglaung half way between it and the Pegu Yomas followed considerably later. The Thamaing, however, shows that many of these places were inhabited prior to their constitution as headquarters of provinces. Zaungtu, Tandawgyi and Kawliya existed before there were kings in Pegu.¹ The Makaw pagoda at Palè on the ridge running east of the Pegu river southwards from Pegu is said to have been repaired by Asoka. Various passages in the Thamaing have preserved the names of villages charged with the care of the Shwemawdaw pagoda, most of them presumably within easy distance of Pegu. Such are Mawsawkanu, Ngatan, Tunta, Inywa, Kyônyadi, Tunkalaing, Tunelè, Tuntangaw, Mogaung, Yega, Shantunet. The line of great pagodas on the ridge east of the Pegu river above referred to—Môkkainggyi, Moganein, Makaw,² Kyaikpadaing (mentioned in the Thamaing as founded by one of the early kings) Payagyi and the twin laterite pagodas of Waw, though doubtless added to later may perhaps be referred to this early period. Numerous other pagodas are mentioned in the Thamaing. Most of them remain unidentified. Almost every knoll in the district particularly south of Pegu is crowned with a massive ruin once a pagoda, of whose history, to the despair of the antiquarian, rarely even a vague legend survives. Excavations usually reveal at least three pagodas one within the other. The treasure

¹ Thamaing, p. 12, 22 and 28.

² The recently discovered Makaw inscription records repairs by Razadirit who began to reign in 1385 A.D. It asserts that the original founder was a hermit who enshrined there one of the Buddha's hairs.

chambers have in most cases been rifled. In one—a nameless pagoda near Taungthuzu hard by Pegu—were found a number of golden images of Buddha whose primitive workmanship indicates a very early date—certainly earlier than Damazedi or his immediate predecessors and quite possibly dating back to the first dynasty before the conquest of Anorata. Unfortunately neither the figures themselves nor the vessels containing them bore a single letter of inscription. The workmanship, if not Indian, is still markedly subject to Indian influence.

Early foreign writers occasionally mention some of the products of Ramanya which attracted the Indian traders. These included, besides silver and gold, a fine cotton cloth a robe of which could be passed through a ring, aloes-wood, and, from the abundance of elephants probably ivory, and hairs from the tail of certain wild animals, used for fly-flaps. The medium of exchange was cowry shells. (See *Relations des Voyages et Textes Géographiques*, Ferrand, I, pages 29, 43, etc). The animal whose hairs were used is the Zamayi. There is a creek at Pegu bearing its name.

Before quite dismissing the subject of early foreign influence on Pegu it is perhaps necessary to refer to a passage in the Jardine Prize Essay (page 26) where it is conjectured that the country of the Talaings was in the 8th and 9th centuries A.D. a dependency of the kingdom of Cambodia. The most recent authority on Cambodian History, Leclère, does not support this conjecture; on the contrary it is clear that Cambodia had great difficulty in securing its hold over what is now Siam and at the most may have occasionally controlled the seaboard of Tenasserim. (Leclère *Histoire de Cambodge*, 1914, Ch. X.)

The first
dynasty.

In view of the scepticism which has been displayed by most scholars as to the historical accuracy of the Talaing chronicles, it has been thought best to set forth first what is known from other sources of the early fortunes of the city. The account of the first dynasty must now be briefly referred to. For the foundation of Pegu as an independent capital three dates are given. Phayre places it in 573 A.D. This is in accordance with a Talaing epic giving an account of Atha or Asah, the third king, and with other Talaing records such as the recently published Arklat history. The Shwemawdaw Thamaing more modestly, gives 825 A.D. while the Domesday book compiled in Bodawpaya's time gives 1155 A.D. The last date, as will appear immediately, is frankly absurd. As between the other two it is difficult

to choose. The date according to the Thamaing is preferable on the general ground that no ruins or relics have hitherto been found in Pegu which appear to be much more than a thousand years old. There was no doubt an Indian settlement at Pegu in the early years of the Christian era and it was probably a dependence of Thatôn. Thamala and Wimala were, however, rebels against the sovereign power and are represented as champions of the Mon nationality. The fact that Thamala's queen was a Karen renders it probable that their rebellion was at any rate assisted by non-Indian tribes. They ousted the Indian, possibly Orissan, colonists of Pegu, wrested the Government from them, and their successors maintained their independence for over two centuries.

The best account of the dynasty beginning with Thamala is contained in the Shwemawdaw Thamaing. Though now only accessible in Burmese it is obviously based on a Talaing original and the editor displays considerable ability in checking the statements of the Talaing authors by reference to the standard histories of Burma. A very fair summary of the early history of Pegu as contained in the Thamaing has recently been given in the *Syriam gazetteer* and it is not necessary to reproduce it here. Pegu became a prosperous town and king after king added to and enlarged the great pagoda. There were occasional attacks by Indians of unspecified nationality which is only the sort of trouble that the known conditions in the Paunglaung valley would lead us to expect. The most interesting fact recorded is the temporary relapse of the last monarch, king Tissa (1043—57 A.D.) to Brahmanism and the "worship of the great-world nats."¹ King Tissa's throne-room is still pointed out within the walls of the old town of Pegu and stone figures of Vishnu and other Hindu deities together with implements of phallic worship have recently been found not far from the palace site. It must be remembered that Buddhism was by this time very weak in India and that the Indian traders and immigrants now coming to Burma would, unlike those of earlier times, be in the main non-Buddhist. From the Thamaing account it is clear that Buddhism was the religion which the people preferred and that they were able to bring sufficient pressure to bear on Tissa to secure that Buddhism should continue to be the state religion. The kingdom then entered on a brief period of happiness

¹ Thamaing, p. 70.

and prosperity which came to an end, as it is implied, in king Tissa's reign, with the conquest of Anorata in 1057 A.D.

There are two curious omissions in the Thamaing which require notice.

The first is the conquest of Lower Burma by the Cholas, a Tamil non-Buddhist race of southern India in 1025—27 A.D.¹ It is generally accepted that the stone pillars of victory originally found on the Hintha ridge and now re-erected in the court compound at Pegu were erected by the Cholas to commemorate their conquest. Incidentally, the fact of this erection shows that Pegu was now a place of some importance. At this time, according to the Thamaing, king Upala was on the throne. The only hint of his relations with foreign powers is found in the following statement: "In this king's reign Thagya presented a magic drum, which, being beat, the monarchs of all countries were constrained to bring his gifts accompanied by expressions of goodwill."² As a record of an invasion this may be compared with the Shwesandaw inscription, according to which the invading Cholas were converted to Buddhism and persuaded to depart in peace. We may perhaps see the effect of the Chola influence in king Tissa's lapse to Hinduism and signs of its waning in his reconversion to Buddhism.

The second notable omission in the Thamaing is that it makes no mention of the fact recorded in the Burman histories that there was a king reigning in Pegu after Anorata's conquest of Thatôn in 1057 A.D. The Hmannan history records that the king of Orissan Pegu (Ussa Pèku) appealed to him for help against an invasion of Gyun Shans; that he sent his son Kyan Sit Tha to expel them and that³ the king of Pegu sent Anorata presents—among them one of his daughters and a golden vessel containing relics held in special reverence by successive kings of Pegu. It may therefore be inferred that the Thamaing is wrong in implying that the first dynasty came to an end with Anorata's conquest. It may have ended soon after or the kings may have been gradually converted into dependent *eaters* but clearly it did not end with the conquest as did the royal house of Thatôn.

It becomes of some importance, therefore, to interpret aright the mistake and omission in the Thamaing. Phayre

¹ Smith, *Early Indian History*, p. 466.

² Thamaing, p. 66.

³ Hmannan I, p. 267.

suggests that owing to the supposed prophecy of the Buddha himself that Pegu should be a royal capital the Burman historian deliberately omitted to record the conquest. The explanation is plausible but the silence of the Kalyani inscription as to the alleged prophecy suggests that it is a fiction of comparatively late date. The real explanation is probably to be found in a remark of Forchhammer's. He says: "I am inclined to believe that Anawrahta's arms were not so much directed against the Talaing as against a chain of foreign colonies which held in possession the whole coast from Chittagong to the Straits. 'He drove', as the Burmans say, 'the Kalas into the sea'." Considering that his invasion of Ramanya followed almost immediately the Chola conquest it is a reasonable conjecture that the two events are associated as cause and effect and that it was the Chola, aggressive neighbours and enemies of Buddhism, whom Anorata wished to expel. Thatôn was annexed because it had become subject to Chola influence: Pegu was spared because it remained a stronghold of the earlier Orissan and Kalingan Buddhist civilization. The attitude of the two kings of Thatôn and Pegu is correctly indicated in the Burmese histories: the king of Thatôn insultingly refused to give Anorata the Buddhist scriptures he asked for¹ whereas the king of Pegu, as we have seen, made him a present of a specially venerated relic casket. Clearly the king of Thatôn at this time cannot have been a good Buddhist or he would have seized the opportunity of propagating the religion.

The Thamaing, therefore, failing to distinguish between the different Indian races and the two factions, roughly Buddhist and non-Buddhist, into which they were divided, wrongly assumed that the conquest of Thatôn must have meant the fall of Pegu. We know that Pegu was spared though with some hesitation we may conclude that it was so spared because it was an ally of Anorata against the Cholas. Incidentally, we have now reached a reasonable explanation of Anorata's claim to be a champion of Buddhism. He was in the first place an enemy of the non-Buddhist Cholas and so became the friend of Buddhism and all its adherents.

The above account of the early history of Pegu has not been easy to compile. It will doubtless be found obscure in several points. The reader may be reminded that this is

¹ Hmannan I, p. 249.

inevitable in the present state of our knowledge and that an appearance of perfect clearness could only be attained at the expense of accuracy by venturing on statements which are not justified by the evidence. In spite of caution, however, the danger of misinterpretation of such scanty facts as are known is ever present and can hardly have been in all cases avoided. More knowledge is required before a satisfactory history of Pegu, or any other part of Burma, previous to the 11th century can be written. The present tentative account has only been compiled in accordance with the requirements of Government. It would not otherwise have been undertaken without many more years' study and only then if the result of such study had seemed to call for it.

The
second
dynasty.

From the end of the first dynasty, probably soon after the conquest of Thatôn by Anorata, Pegu would form a part of the Burman Empire and of course no one thought it worth while to record the fortunes of a kingless town. The Peguans were liable to military service in the Burman wars. Ten thousand Talaings were called away on an expedition to Arakan in the beginning of the 12th century A.D.¹ Their country suffered invasion from the enemies of the king, as in 1169 A.D. when the king of Ceylon exacted vengeance for injuries inflicted on Indian traders to Anamana (Ramanya). These were only such vicissitudes as any country however governed must expect. On the whole Pegu may be supposed to have prospered under Burman rule at this period.

The Government was strong enough to prevent the acquisition of undue influence by Indians or other foreigners and the conditions were on the whole favourable to the growth of a Mon nationality from the very heterogeneous elements composing the population of the Paunglaung valley. We know very little of the commerce of Pegu at this period but the aptitude for trade which the Talaings possess—inherited, perhaps, from Indian ancestry—had probably by this time manifested itself.

In the last quarter of the 13th century as a result probably of Kubla Khan's invasion the empire of Pagan began to collapse. The Shans established themselves in Ava; Prome and Toungoo apparently became independent and in 1287 Wagaru with the assistance of the Siamese made

¹ Dinnyawadi Razawinhtit, p. 106, and Rakaing Minthami Egyin, p. 102.

himself king in Martaban. From there he conquered and annexed Pegu. About fifty years later his successors finally freed themselves from allegiance to the Siamese, though Siam still continued to harass the new kingdom by instigating the Zinmè Shans to attack it. In the reign of Byinnya U the predecessor of the great king Razadarit the capital was finally moved to Pegu or Hanthawaddy.

Before proceeding to trace the expansion of the kingdom under Razadarit, it may be of interest to determine the exact site of the new capital. The Thamaing says (page 79) that Tissa Raja built the Thinbaw paya to enshrine the relics brought by sea from India (Nga Dula, a ship's captain, had seen that the people of Burma set great store by objects which were so little valued in India as to be playthings of children, and brought over a consignment of relics from a dilapidated pagoda on the banks of the Ganges). The Thamaing quotes authority to prove that this Thinbaw paya was near the Dangawdôn gate and argues that it is to be identified with an ancient pagoda near Shweban—a village on the Toungoo road north-east of Pegu on the eastern edge of the high land. The whole of the country round Shweban is covered with pagodas but none of them is now known as Thinbaw paya. The name Shweban itself, however, is obviously a corruption of Kyaikpan (ကျောက်တောင်) the pagoda of the ship. The Dangawdôn gate therefore was near Shweban. It was probably the gate leading to the harbour.

Now the name Dangawdôn gate occurs in a passage of the Paklat history (pages 178-9) referring to the reign of Byinnya U, from which it would appear that the new dynasty took possession of the old town. It is perhaps unnecessary to labour this as it is quite clear that neither Byinnya U nor any of his predecessors would have had sufficient leisure or sufficient authority to build for themselves a new town. The passage, however, is otherwise interesting. Byinnya Nwè (Noa, later Razadarit) plotted to wrest the kingdom from his father. In order to decide from which part of the country to make his attack he visited each of the gates of Pegu town in turn and listened for omens. (မုခ်တောင်တံခွန် ချဉ်းထွေ) The gates were visited in the following order (1) မုခ်ကြွတ် (2) မုခ်တဲ (3) တာထာထွတ် (4) ဒွေဝံချဉ် (5) မေထာ (6) ဖျာနန်. Now the two first *Muh Krug* and *Muh tao* must be gates in the western wall facing the high land and leading to two ridges known as the *Muh Krug* mango ridge and *Muhtao* Shwemawdaw ridge. The arrangement of the gates

was probably as follows:—*North*, Tsatablih. *East*, Dangawdung and Mèloa. *South*, P'ya Non. *West*, Muh Krug and Muhtao. The Dangawdun or Dangawdôn gate would thus lie nearest to Shweban village as in Pônnarika's time, showing that the old town continued to be occupied. It is true that the Thamaing (page 90) says that Byinnya U cut and cleared the site of the fort of Hanthawaddy and built a new palace and a new fort (ယံသာဝတီမြို့စောင်ကိုထုတ်သင်ရှင်းလင်းပြီးမှ ထီးသင်နန်းသစ်မြို့တစ်ရပ်တည်၍စံတည်။) but it is doubtful if this amounts to more than jungle clearing and repairs to the walls—a new palace and other buildings would of course be necessary. Razadarit on his accession appears to have made extensive improvements to the fortification. (မြို့ရိုးမြို့နံ့မှစသောမြို့၏အင်္ဂါကြွယ်ဝမှုကိုထူးမြှင့်တင်မှုသည်။). The old town continued to be occupied by Razadarit's successors till about the middle of the 15th century A.D. It was probably at this period that the large number of excellently built square cement wells were constructed. Some are still in use.

Shin Sawbu (Binnye T'ao) whose dates are variously given as 815 to 822 (Phayre) and 825 to 832 (သုတေသနအဖွဲ့) spent the greater part of her short reign in Rangoon where she built a town west of the Shwedagôn pagoda (သုတေသနအဖွဲ့ ; Paklat History, page 433). But she seems clearly to have intended abandoning the old town of Pegu and building a new town further west so as to include the Shwemawdaw pagoda. The following passage from the Thamaing, page 115—too naive to be untrue—is well worth study: "At that time there was yet no fort surrounding the Shwemawdaw pagoda. There was only open land. In addition to the land dedicated by Thamantaraza Minu, Shin Sawbu made further offerings of land. When she heard of the ancient prophecy contained in the writings of Gavampati and others that in future a great town should spring up surrounding Shwemawdaw pagoda she greatly rejoiced. And in order that future kings should not encroach on sacred land she had all pagodas, monastic and other religious land carefully demarcated with stone pillars." Thus there was already an intention of moving the town, which was carried out by Shin Sawbu's successor Damazedi. But what is striking in the above passage is the reason given for the project. It would appear that Shin Sawbu had only just heard of the prophecy that Hanthawaddy should be the capital of a great kingdom.

Of Damazedi the (သမာဒိရာဇဝံသ) says " outside of the town, west of the slopes of the Shwemawdaw, he founded a town. He built a temporary palace, stables for elephants and horses and ruled there. The Paklat History (page 43) gives much the same account with the additional detail that the place where Damazedi established himself was called သံဃာတောင်. The Thamaing (page 119) contributes the information that the wall of his town was of logs only. There is no record that either of Damazedi's successors did anything towards the foundation of a permanent town. Up to 1540, therefore, there was no town or fort in Pegu except the ancient one east of the Hintharidge and west of Kamanat village, through which the Thanatpin road now passes.

Razadarit first reduced Martaban which had revolted and formed an alliance with the king of Siam. He next reduced to order Bassein and Myaungmya which had rebelled against him. The rest of his reign he spent in fighting the kings of Ava. He was on the whole successful. He extended his kingdom as far as Prome and Toungoo and maintained for some time a regent at the Court of Arakan. He had several times to repel invasions of Shans, and once, it would seem, of Siamese.

The immediate successors of Razadarit were without exception weaklings and had frequently to appeal to Ava for help against internal factions. Princess Binnyè T'ao, better known as Shin Sawbu of whom according to Talaing belief Queen Victoria was a reincarnation was made a pawn in the game and given in marriage to the king of Ava. She later fled from Ava to Pegu and on the death of the last male descendant of Razadarit, she became queen of Pegu in her own right. Her reign was short and unimportant, except that it gave Pegu seven years of rest and peace. Damazedi, her successor, was likewise a peace-loving monarch and was enabled to follow his bent by reason of the constant wars with the Shans in which Ava was involved and the fact that two independent kings had established themselves in the frontier states of Prome and Toungoo. His successor Binya Rem (Ran) during a long reign of thirty-three years was also successful in avoiding war. The next king Dekarotpoi (Tagarutpi) seems to have been a worthless character who alienated the loyalty of his ministers and adherents. Pegu fell an easy prey to Tabin Shweti, King of Toungoo in 1540—and so ended the Wagaru dynasty.

From 1453 or 1463 the date of Shin Sawbu's, accession to 1540 Pegu enjoyed almost unbroken peace. Religion, the arts, and commerce flourished, so that European travellers had no difficulty in regarding Hanthawaddy as a highly civilised state. The people had every reason to be satisfied with their kings and undoubtedly regarded them as natural heads of the nation. This was not the case under the Toungoo dynasty whose Government, involving as it did continuous warfare, was always unpopular. Pegu is to be seen at its best and happiest in the end of the 15th and beginning of the 16th century under the kings of Mon race who have been briefly referred to, and it is of this purely Talaing Pegu that we shall try to present a picture.

It has been shown that from a very early period, Pegu had regular commercial relations with India. What the articles of commerce were is less certain but as India was a market where the wants of Europe were supplied we may suppose that the Indian traders purchased much the same commodities as the Portuguese and other European traders who found their way to Pegu in their own ships after the discovery in 1498 of the sea route round the Cape of Good Hope. These commodities were not necessarily produced in Pegu. Some, such for instance as rubies, may have been brought to the coast towns for export from Burma proper. It is also uncertain what India gave in exchange. Cotton goods and fine fabrics, gold ornaments and figures of Buddha made specially for the Pegu market, long after India had ceased to be a Buddhist country, and manufactured articles in general, were probably given in barter for the native products. Thus clay cast figures of Buddha found at Twante are clearly of Indian Gupta origin. Later, firearms and ammunition would form an important part of the imports. Of the exports during the latter part of the second dynasty the following extract from early books of travel may give a fair idea. (Quoted from Hobson-Jobson except where otherwise stated.) A.D. 1430 "Quae regio (Tenasserim) et elephantes et verzano (brazil wood used in dyeing) abundat"—*Nic de Conti*.

A.D. 1442. "The inhabitants of the shores of the ocean come thither (to Hormuz) from the countries of Chin, Javah, Bangala, the cities of Zirbad, of Tenaseri"—*Abdurazzak, quoted in Hobson-Jobson*.

1498 A.D. "Pegu is a land of Christians and the king is a Christian; and they are all white like us. . . . Here is all the musk in the world and on the main land he

has many rubies and much gold . . . and there is much lac and benzoin."—*Roteiro de V. da Gama*, 112.

1498 A.D. "Tenacar. In this land is much brasyle which makes a fine vermilion . . . also there is here aloes wood but not much"—*Roteiro*, 110.

1505 A.D. "One (ship) from Pegu with a rich cargo of lac, benzoin and musk"—*Correa i.*, 611.

1506 A.D. "At Tenasar grows all the verzi and thence come pepper, cinnamon, cloves, mace, nutmeg, galanga, camphor that is eaten, and camphor that is not eaten. . . This is indeed the first mart of spices in India"—*Leonardo la Masser Anderson's Siam*, page 22.

1514 A.D. "Then there is Pegu, which is a populous and noble city abounding in men and horses, where are the true mines of rubies, and there in great plenty; and they are fine men, tall and well limbed and stout; as of a race of giants"—*Empoli*, 80.

Perhaps the most complete description of the trade of Tenasserim (on which it must be remembered Pegu at this time levied duties) is to be found in the travels of Duarte Barbosa quoted by Anderson, page 29 (early XVI century). He mentions that in his time ships of the enterprising merchants of Tenasserim were to be seen at Cape Guardafui and at Ravel, and that the merchants of Bengal sent large junks to that port. He says "from the kingdom of Peigu as far as a city which has a seaport, and is named Tenaseri, there are a hundred leagues. In this city are many Moorish and Gentile merchants, who deal in all sorts of goods, and own ships with which they navigate to Bengal, Malaca and other parts. In the inland parts of this kingdom there grows much good benjuy and it is of two kinds, that it is to say, one which does not smell except in the fire and the other of much scent, of which the genuine storax is made in the Levant, before extracting from it the oil, which in the Levant is extracted from it. And many ships of Moors and from other parts congregate at this port of Tanasary, and bring them copper, quicksilver, vermilion, scarlet cloth, silk, coloured velvets from Mekkah, saffron, coral wrought and in strings, rose-water from Mekkah in little bottles of tinned copper, and it is sold by weight with the bottle; opium, Cambay stuffs, and all these goods fetch a high price at this place.

1514. "Martaban, the people also heathens; men expert in everything, and first rate merchants; great masters of accounts, and in fact the greatest in the world. They keep

their accounts in books like us. In the said country there is great produce of lac, cloths and provisions"—*Empoli*.

1516 A.D. "In this town of Martaban are made very large and beautiful porcelain vases and some of glazed earthenware of a black colour, which are highly valued among the Moors, and they export them as merchandise." *Barbosa*, 185. (Yule also quoted from Sbn.) Batata to show that Pegu jars were known as Martabans as early as 1350 A.D.

From the above extracts it will be seen that Pegu was a very different place from the Pegu known to us. Rice and teak are not mentioned as articles of export at this period. Some of the other products are still found in Mergui and Tavoy. Pegu district was a wilderness at the time of the British occupation and when it was resettled took to rice cultivation to the exclusion of other crops. In the days of Damazedi there must have been large areas under rice immediately round the capital and salt boiling too seems to have been extensively practised. Salt and rice, however, were not sent abroad but probably only to the less fertile up country districts. Fish, as is indicated by an old rhyme was regularly sent to the Pegu market. There is no evidence that in this period the merchants of Pegu had sea-going vessels of their own or actually traded to foreign parts. That they did so is however probable from the fact that we find numbers of them settled in India in the 17th century. In 1519 a Portuguese factory was established at Martaban. Internally, trade would proceed by barter. Foreign merchants for large transactions used the weight known as bahar, and the price of a bahar of (say) pepper would be fixed at a certain weight of silver. Indian or other coins would pass from hand to hand at a value depending on their purity and weight.

Of manufactures we hear little. Pottery alone seems to have attained any importance. Beside Pegu jars and porcelain, considerable numbers of workers would be employed in making the beautiful glazed plaques in three colours such as are found in the ruins of Shwegugyi and others of Damazedi's pagodas. That these were made in Pegu and not imported from India seems proved by the fact that in addition to the legends sometimes stamped on the obverse, the name of the donor is occasionally scratched on the reverse and this must have been before the clay dried.

Pegu was always famous for mason work and architecture. A small cave or *ku* in the old town, dating from the

beginning of the Wagaru dynasty or possibly earlier shows that the builders had attained great skill in the construction of pointed arch work. By Damazedi's time this art had been forgotten. In the Shwekugyi and other pagodas attributed to him a large block of cement replaces the arch. The cement was of excellent quality and may have been regarded as of greater strength. Damazedi erected several large pagodas on the Zaingganaing side including the Shwekugyi and the Kyaikpôn—which latter is generally regarded as showing Siamese or Cambodian influence. From the style of the inscriptions and the nature of the cement blocks on which they are written (the date is rarely legible) we may conjecture that many other pagodas were repaired about this time, not necessarily by the king himself. Such are the Kyaikmahaw, the Mōkkaingyi and Moganein pagodas on the Tawa Palè ridge. The first mentioned is now again under repair. It is one of the largest and best situated in the whole of Burma. The state of the ruins of pagodas and monasteries in that beautiful plateau between the old and the new towns, which must have been a city of religious buildings in itself, also seems to point to the end of the 15th and beginning of the 16th century as the date of their construction. They are so numerous as to show that the rich men of Pegu must have vied with one another in works of merits.

Of the king who ruled over this fair and prosperous realm, one of the early travellers Lewes Vertomannus says: (Phayre, page 263) "The king useth not such pomps and magnificence as doth the king of Calicut, but is of such humanity and affability that a child may come to his presence and speak with him. It is in a manner incredible to speak of the rich jewels, precious stones, pearls and especially rubies which he weareth, surmounting in value any great city." This was said of Binye Rem, Damazedi's successor, a happy prince ruling over a happy people.

The constant warfare in which Pegu was involved during the reigns of Tabinshweti and Bayin Naung is chronicled elsewhere and need only be briefly touched on here. Martaban, Prome, Ava, Zinnè, Siam, the Lao territory were in turn annexed and placed under tributary kings, Arakan alone succeeded in maintaining a precarious independence and Bayin Naung met his death on an expedition thither in 1581.

The third
or
Toungoo
dynasty,
1540—99.

The attitude of the people, more especially in the neighbourhood of the capital, was permanently hostile. Their

hostility was partly due to the fact that the ruling dynasty was of alien race but mainly it seems to have sprung from the never-ending war, and distant expeditions on which their young men had to serve. The most successful of the rebels was Thameintaw whose name is still remembered all over the Irrawaddy delta. He and his followers, unable as yet to attack the capital, retired to the Bassein side. In Pyapôn he is commemorated by the large village of Thameintaw some miles south of the district headquarters; and south of that again, at Myoyôn on a pleasant little island of high land with fruit trees of many kinds, there exists a tiny fort which is traditionally regarded as having been built and occupied by Thameintaw. He actually became king in Pegu for a short time, after the death of Tabin Shwe Ti and before Bayin Naung had consolidated his power.

After Bayin Naung's death, the senseless succession of hopeless expeditionary adventures still went on to the complete ruin of the country immediately round Pegu till in 1599, all the neighbouring kings probably by concerted action swooped down on Hanthawaddy town and after an easy victory partitioned the kingdom among them. Siam took the east and established tributary kings in Tavoy and Martaban. Arrakan took Syriam; and apparently Pegu itself, Toungoo and Prome asserted their independence.

From 1600 to 1613 there was an orgy of confused fighting. The Portuguese de Brito or Nga Zinga obtained recognition from the reluctant king of Arrakan as Governor of Syriam and later with the consent of the Viceroy of India and the approval of the Talaing notables he established himself as king in Pegu. Arakan with the help of Prome and Toungoo in vain attempted to dislodge him. De Brito, however, seems to have been doubtful of his position and under the plea of Christian evangelism, amassed what wealth he could by rifling the great pagodas of Pegu, particularly those which Bayin Naung had built. Meanwhile Anaukpetlunmin had brought all the upper country into subjection and in 1613 invaded Pegu and ran de Brito to earth in Syriam. The adventurer was then executed in circumstances of horrible cruelty and his wife and followers taken as slaves to Ava. A few days after de Brito's capture, perhaps while he still lingered in life, five ships from Goa sailed up the river to his relief.

Anaukpetlunmin reigned in Pegu. His successor, Thalunmindayagyi, transferred the capital to Ava and

devoted himself chiefly to subjugating the outlying parts of his kingdom in the north. Talaing rebellions sometimes instigated by the Siamese were frequent. From about 1650 Upper Burma was repeatedly invaded by the Chinese and Manipuris and Ava's control over the maritime provinces gradually weakened till a century later in 1740 a Kwe Shan, a descendant of those who had been settled near Pegu by Bayin Naung, headed a rebellion and the Talaings again made a bid for independence. In 1746 the pretender unaccountably abandoned his project. He was succeeded by one of his supporters who afterwards took the title of Byinnya Dala. Under the leadership of a general of marked ability, the famous Dalaban, the Talaings invaded the upper country and in 1752 after a siege of some months reduced the capital city of Ava. There Dalaban remained with his army and the Mons seemed in a fair way to the attainment of sovereign power over the whole of Burma. The dream was of a short duration and five years later Alaungpaya was in Pegu.

At this point it will be convenient to say something of local conditions in Pegu during the two centuries from the end of the Wagaru dynasty in 1540 to the final subjection of Pegu by Alaungpaya. To deal first with topography we have seen that though Shinsawbu and her successors planned to build a town surrounding the great pagoda, this design was never actually carried out. The Kings of Pegu seem in fact to have lived in a fortified palace till the time of Bayin Naung who was the builder of the modern town. The Thamaing relates that in 928 B.E. (1506 A.D.) "Hanthawaddy sinbyushin (*i.e.*, Burin Naung) built the present town with its four walls of 3,400 fathoms (*ta*) length each way." The account in Hmannan (II pages 400—484) is fuller and contains information on several points of local interest. The heir apparent represented to the king that there was in Pegu no town or fort with walls, moats and other distinguishing marks of a capital and that it was proper that one should be built. After consulting the ministers of state, wise men, and soothsayers the king gave orders that from all the territories of Hanthawaddy one man from each household should be summoned and on Thursday the 10th waxing of Tazaungmôn 928 the work was commenced. The site of the town was first levelled by filling up the western part with earth from a hill to the east. The workmen were like innumerable busy ants. In Tabaung of the same year the

digging of the moat commenced. The names of the gates were—

North—Taninthari, Yodaya, Mòktama.

East—Pyi, Maw, Taungngu.

South—Zinmè, Ônbaung, Dawè.

West—Kale, Monè, Nyaunggywe.

Bayin Naung's capital was hardly occupied by Anaukpetlunmin. The Hmannan (III 178 to 192) contains various references to his movements from which the following information can be collected. When Anaukpetlunmin first settled in Pegu in 975 B.E. (1613 A.D.) he occupied a temporary palace outside the town. In 978 he moved to another temporary abode inside the fort and from 988 to his death in 990 he lived in another temporary palace on the west bank of the Pegu river. (ချောင်းသစ်အနောက်ဘက်ယာယီနန်းတော်သို့ပြောင်းတော်မူသည်။ page 192)

ချောင်းသစ် can only refer to what is now known as the Pegu river and the name seems to indicate a comparatively recent change of course. If, as is generally agreed the Gulf of Martaban extended up to and beyond Pegu on the east and the Thanatpin swamp was clearly an arm of the sea at no very distant date—the Pegu river must certainly have flowed into it instead of following its present devious course to Rangoon. With the silting up of the Gulf of Martaban and the change in the river's course the harbour of Pegu would necessarily be moved from the east to the west of the town¹; and this would explain the abandonment of the original town by the later kings of the Wagaru dynasty. The traders' quarter seems to have been at Sidi on the Pegu river a mile below Pegu: the name Sidi is rightly held to be a corruption of *Kwan setithute* village—and here the wealthy merchants and brokers of whom we hear in the journal of ancient travellers resided. The land to the west of the town was swampy and was only reclaimed by the British after the annexation.

¹ Cæsar Frederic spent two years in Pegu about 1665-6, and obviously knows what he is talking about in his detailed and interesting account of it. Now he speaks of Pegu as a large river port reached by sea in three or four daies. He also describes the great macareo encountered on the way, which can only be the bore of the Sittang. These facts together with the otherwise inexplicable.

ချောင်းသစ်, the finding of ships cables in the ground at Payagyi 12 miles north of Pegu, and the conformation and salty character of the land east, north-east and south-east of Pegu together with the great importance of Pegu up to about 1600 and its sudden and permanent decline thereafter, prove that Pegu was geographically as

Of the state of the people in the time of the Toungoo Kings it is unnecessary to say much. Travellers describe the magnificence of the new town and palace. Trade in the commodities above mentioned continued, and Bayin Naung, we hear, built a ship of his own for trade with Ceylon and Southern India ports. "In India," says Fitch, "there are few commodities which serve for Pegu, except opium of Cambaia, painted cloth of St. Thome, or of Masulipatan, and white cloth of Bengala, which is spent there in great quantity. They bring thither also much cotton yarn, red coloured with a root which they call saia, which will never lose its colour; it is very well sold, and much of it cometh yearly to Pegu. By your money you lose much. The ships which come from Bengala, St Thome, Masulipatan, came to bar of Negrais and Cosmin.

To Martaban, a port of the sea in the kingdom of Pegu, come many ships from Malacca, laden with sandal, porcelains, and other wares of China, and with camphora of Borneo, and pepper from Achin, in Sumatra. To Cirion, a port of Pegu, come ships from Meca, with woollen cloths, scarlets, velvets, opium and such like. There are in Pegu eight brokers whom they call Tareghe, which are bound to sell your goods at the price which they be worth, and you give them for their labour two in the hundred, and they be bound to make your debt good; because you sell your merchandizes on their word. If the broker pay you not at his day you may take him home, and keep him in your house, which is a great shame for him. And if he pay you not presently you may take his wife and children, and his slaves, and bind him at your door, and set them in the sun for this is the law of the country. Their current money in these parts is a kind of brass, which they call ganza, wherewith you may buy gold, silver, rubies, musk, and all other

much the port of Burma as Rangoon is now. The stories of its founding refer to it as an island in the sea. Finally none of the 32 towns of Hanthawaddy are east of it till we get to Sittang across the river or gulf. It was situated on the south or right side of the old Pegu river and the north-west apex of the Gulf of Martaban. Its river was the Sittang and not the Pegu, before the latter cut its present channel behind or west of the town, on the silting up of the Sittang. The port and old town—the old city where according to Cæsar Frederic the merchants lived—was about two miles east of the present town. It is curious that the new town should have been built so conveniently for the change on the course of the Pegu river which was so soon to take place. Mandalay is another instance of the royal fort being built away from the river and bazaar quarter. To-day the moat on the west of Pegu is only about 200 yards from the river.

things. The gold and silver is merchandize, and is worth, some times more, sometimes less, as other wares be. This brazen money doth go by a weight, which they call a biza, commonly, this biza, after our account, is worth about a half crown, or somewhat less. The merchandize, which be in Pegu, are gold, silver, rubies, sapphires, spinnells, musk, benjamin or frankincense, long pepper, tin, lead, copper, lacker whereof they make hard wax, rice and wine made of rice, and some sugar."

Linschoten who resided in Goa from 1583 to 1588 mentions the Peguans "whereof many dwell in India some of them being Christians." It is about the end of the 16th century that we first hear of the export of rice (Anderson, page 35). This was taken as food for the ship's company of vessels trading to Pegu ports, and not, as far as can be ascertained, as cargo. A letter of the King of Portugal to the Goa Government contains the first mention of the export of timber (probably teak) from Pegu (Hobson Jobson, page 911). "We enjoin you to be very vigilant not to allow the Turks to export any timber from the Kingdom of Pegu." It appears that from the arrival of the Portuguese in India all ships and boats made either by Moors or Gentiles were of this wood. They first obtained the timber in their own colonies in India and it is not till the 18th century that Martaban is mentioned as *the* place for teak (*ibid*). Phillip Baldoeus, writing in Ceylon in the middle of the 17th century, shows that the bulk of the trade to Pegu was of the same character as it had been a century earlier. "From hence (Pulicat) to Arrakan, Pegu and Tanassery you pay eight or ten *per cent.* for freight of pepper, sandalwood, stuffs, steel, and iron and make your returns in gold, rubies of Ava, gumilacca, long white pepper, lead, etc." (Anderson, page 41).

The trade to Pegu was in the hands of the Portuguese and the "Moors" (or Mohammedan traders from India or elsewhere). Early in the 17th century Dutch traders and the English East India Company attempted to establish themselves in Syriam and some of the river ports. By the middle of the century their agents had all been withdrawn.

Pegu itself was not a seaport.¹ Martaban and by the end of the 16th century Syriam received most of its exports. These did not increase as they should have done during the Toungoo dynasty and after the fall of de Brito Pegu town

¹ But see footnote above, p. 32.

lost its importance as a capital and became an insignificant country town. The ruin and devastation of the country adjoining the capital is described by a Jesuit priest writing about the beginning of the 17th century and from then onwards its state must have become gradually worse. He says (Phayre, page 270) "that they did eat each other; and in the city of Pegu there were not of all ages and sexes above thirty thousand remaining. It is a lamentable spectacle to see the ruins of temples and noble edifices, the ways and fields full of skulls and bones of wretched Peguans killed and famished." About 1612 Floris, a Hollander (also quoted by Phayre) after recounting the story of de Brito, remarks, "in this manner came this mighty empire to ruin, so that at this day there is no remembrance of it."

With the decline in the importance of Pegu our records become fewer and it is not till after the conquest of Alaungpaya that we are enabled to picture the condition of what is now the Pegu district. It would appear, however, from tradition that in the beginning of the 18th century families who had fled from their homes began to return and re-occupy their deserted villages and that during the brief period before Alaungpaya when Pegu was again a capital, its immediate neighbourhood was not unprosperous.

For the period from the conquest of Pegu by Alaungpaya to the present day there appear to be no Talaing chronicles other than a brief and barren record of dates. A good deal of information can be collected from the Kônbaung-zet Razawin, the Hanthawaddy Sittan or Domesday book, San Germano, the Journals of Cox, Symes, Crawford and other English books and from the early files in the Commissioner of Pegu's office. From these last notes of important documents were taken. These notes have unfortunately been lost and there has been no opportunity of replacing them.

Later
Burmese
period.

Pages 193 to 247 of the Kônbaung-zet history give details of Alaungpaya's conquest of Pegu. He left Rangoon on the 5th waxing of Thadingyut 1118 and had reduced Pegu by the 10th waning of Kasôn 1119. That is to say, Pegu occupied his attention for the whole of the open season of 1756-57. The advance was made both by land and water. Resistance was met with at several points, more particularly Paingkyôn apparently south of Môk-kainggyi, Kyaikpadaing and Nyaungbin. Nyaungbin is now known as Zenyaungbin, *ze* probably representing the

Mon *zoa*, a banyan tree, and identical in meaning with *Nyaung*. The advance was not easy, the Peguans being thought superior in artillery, and Alaungpaya seems occasionally to have resorted to rather doubtful expedients. The fondness for liquor among the Pegu soldiery was taken advantage of and poisoned spirits put in their way. Treachery was encouraged as in the case of Dawzweyazet and Dalaban—the Kônbaung-zet knows nothing of his attachment to the King of Pegu's daughter who was given in marriage to Alaungpaya (Phayre, page 162). The local tradition is that Pegu was starved out and this is the best explanation of the prolonged negotiations between besiegers and besieged which Alaungpaya clearly intended to be infructuous. Gallant actions are recorded on both sides, *e.g.*, the capture of Nyaungbin by a body of picked men who rushed on almost certain death shouting the battle cry "Shwebotha, Shwebotha," and the nearly successful night attack by Dalaban on Alaungpaya's fort, near Sidi.

Alaungpaya had troops on both sides of the Pegu river and himself for the most part occupied the little fort of Zetuwadi near Sidi, part of which is still in existence, though the river bank has eroded considerably at the west end. In one of the monasteries of Sidi a bronze bell is shown, which is said to have been cast by Alaungpaya. He entered Pegu by the Mohnyin gate in the south wall with a large force including "white Kala sailors" amid a gentle drizzle which seems to have been considered a good omen. After a stay of about two months in the Pegu King's palace he destroyed the fortifications and left for Rangoon with much plunder. At page 261 of the Kônbaung-zet will be found a list of the skilled workmen and artists whom he took from Pegu. The list cannot be read literally as it seems merely a conventional catalogue introduced by the historian on every occasion of conquest. It includes Burman, Talaing and Tamil musicians and dancers, writers in ink and gold, writers with the stilus, cabinet-makers and carpenters, carvers, turners, blacksmiths, jewellers, workers in glass mosaic, masons, painters, tailors, makers of gold and silver-cloth, barbers, polishers of precious stones, men skilled in charms and medicines, cooks, elephant and horse doctors, makers of gold and silver lace.

Varying opinions are held regarding the Burmese treatment of Pegu under the Alaungpaya dynasty. It was undoubtedly at times liberal but was not consistently so. Anyhow the result of Burman rule was that Lower Burma in

general and Pegu in particular became gradually depopulated. We hear of emigrations to Siam at the time of Alaungpaya's conquest (Phayre, page 168) in the reign of Sinbyushin, 1763—75 (Kônbaung-zet 504) and again on a large scale after the first Burmese war (Crawford, page 482). Rebellion occurred pretty frequently till 1825 when the population was probably too sparse to admit of it and each we may suppose was followed by a further exodus to British territory or to Siam. Talaing levies were taken on the various disastrous expeditions to Siam and elsewhere and Bodawpaya even summoned the Talaings to work at the repairs of Meiktila lake. It is not stated whether they were called on to help at the removal of the capital from Ava to Amarapura or the Mingun pagoda. Tradition says that a passage of a Burma army on its way to Siam through Pegu would utterly devastate the country. We need not therefore be surprised that Pegu on its annexation by the British was found to be almost an uncultivated waste (*see* Laurie, Mrs. Judson and other writers).

Pegu for some time after the conquest was the headquarters of a Wun. The officer who held this post at the time of Symes' visit in 1795 appears to have been the Taungmingyi Maha Thihathura (Hanthawaddy Sittan, account of Tandawgyi myo). He made great efforts to repopulate uninhabited parts of the country and, from Symes' account, seems to have been a broadminded and able governor. His affability made an impression on Symes, whose visit to Pegu was at the time of the water-festival, which predisposed him to view the Burmese Government and its policy with perhaps undue partiality, not effaced to the end of his visit. Fortunately he was more concerned to record his observations than to moralise and for our purpose his book is more valuable than some of the other contemporary documents. The following somewhat lengthy extracts are from pages 182 to 202 of his journal.

I. "The fate that befell this once flourishing city has already been recounted in the preceding pages. The extent of ancient Pegu may still be accurately traced by the ruins of the ditch and wall that surrounded it; from these it appears to have been a quadrangle, each side measuring nearly a mile and a half; in several places the ditch is choked up by rubbish that has been cast into it, and the fallings of its own banks; sufficient, however, still remains to show that it was once no contemptible defence;

the breadth I judged to be about sixty yards, and the depth ten or twelve feet: in some parts of it there is water, but in no considerable quantity. I was informed, that when the ditch was in repair the water seldom, in the hottest season, sunk below the depth of four feet. An injudicious faussebray, thirty feet wide, did not add to the security of the fortress.

The fragments of the wall likewise evince that this was the work of magnitude and labour; it is not easy to ascertain precisely what was its exact height, but we conjectured it at least thirty feet, and in breadth at the base not less than forty. It is composed of brick, badly cemented with clay mortar. Small equidistant bastions, about 300 yards asunder, are still discoverable, there had been a parapet of masonry, but the whole is in a state so ruinous and so covered with weeds and briars, as to leave very imperfect vestiges of its former strength.

In the centre of each face of the fort there is a gateway about thirty feet wide; these gateways were the principal entrances. The passage across the ditch is over a causeway raised on a mound of earth, that serves as a bridge, and was formally defended by a retrenchment, of which there are now no traces.

It is impossible to conceive a more striking picture of fallen grandeur, and the desolating hand of war than the inside of these walls displays. Alompra, when he got possession of the city in the year 1757, razed every dwelling to the ground, and dispersed or led into captivity all the inhabitants. The temples or praws, which are very numerous were the only buildings that escaped the fury of the conqueror; and of these the great pyramid of Shoemadoo has alone been revered and kept in repair.

The present king of Birmans, whose government has been less disturbed than that of any of his predecessors, early in his reign turned his thoughts to the population and improvement, as well as the extension, of his dominions and seemed desirous to conciliate his subjects by mildness, rather than govern them by terror. He has abrogated some severe penal laws imposed by his predecessors upon the Taliens or native Peguers. Justice is now impartially distributed, and the only distinction at present between a Birman and a Talien, consists in the exclusion of the latter from places of public trust and power.

No act of the Birman Government is more likely to reconcile the Peguers to the Birman yoke, than the restoration

of their ancient place of abode and the preservation and embellishment of the temple of Shoemadoo. The King, sensible of this, as well as of the advantages that must arise to the state from an increase of culture and population, five years ago issued orders to rebuild Pegue, encouraged settlers by grant of ground, and invited the scattered families of former inhabitants to return and repeople their deserted city.

His Birman Majesty, more effectually to accomplish this end, on the death of the late Maywoon, which happened about five years ago, directed his successor, the present governor, to quit Rangoon, and make Pegue his future residence, and the seat of provincial government of the thirty-two districts of Henzawuddy.

These judicious measures have so far succeeded, that a new town has been built within the site of the ancient city; but Rangoon possesses so many advantages over Pegue, in a commercial point of view, that persons of property who are engaged in business will not easily be prevailed upon to leave one of the finest seaports in the world, to encounter the difficulties of a new settlement, where commerce, if any can subsist, must be very confined from the want of a commodious navigation. The present inhabitants, who have been induced to return, consist chiefly of Rhahaans, or priests, followers of the provincial court, and poor Talein families, who were glad to regain a settlement in their once magnificent metropolis. The number altogether perhaps do not exceed six or seven thousand; those who dwelt in Pegue during its former days of splendour are now nearly extinct; and their descendants and relatives scattered over the provinces of Tongho, Martaban, and Talowmeou; many also live under the protection of the Siamese. There is little doubt, however, that the respect paid to their favourite temple of worship, and the security and encouragement held out to those who venture to return, will, in time, accomplish the wise and humane intentions of the Birman monarch.

Pegue, in its renovated and contracted state, seems to be built on the plan of the former city and occupies about one half of its area. It is fenced round by a stockade from ten to twelve feet high; on the north and east sides it borders on the old wall. The plane of the town is not yet filled with houses, but a number of new ones are building. There is one main street running east and west, crossed at right angles, by two smaller streets not yet finished. At

each extremity of the principal street there is a gate in the stockade, which is shut early in the evening, after that hour entrance during the night is confined to a wicket. Each of these gates is defended by a wretched piece of ordnance and a few musqueteers, who never post sentinels, and are usually asleep in an adjoining shed. There are two inferior gates on the north and south side of the stockade.

The streets of Pegue are spacious, as are those of all the Birman towns that I have seen. The new town is well paved with brick, which the ruins of the old plentifully supply; on each side of the way there is a drain to carry off the water. Houses of the meanest peasants of Pegue, and throughout the Birman empire, possess manifest advantage over Indian dwellings, by being raised from the ground either on wooden posts or bamboos, according to the size of the building. The kioums or monasteries of the Rhahaans and the inhabitants of the higher ranks, are usually elevated six or eight, those of the lower classes from two to four feet.

There are no brick buildings either in Pegue or Rangoon except such as belong to the king, or are dedicated to their divinity Gaudma: His Majesty has prohibited the use of brick or stone in private buildings, from the apprehension I was informed, that if people got leave to build brick houses, they might erect brick fortifications dangerous to the security of the state. The houses, therefore, are all made of mats or sheathing boards, supported on bamboos or posts; but from their being composed of such combustible materials, the inhabitants are under continual dread of fire, against which they take every precaution. The roofs are lightly covered, and at each door stands a long bamboo, with an iron hook at the end to pull down the thatch. There is also another pole, with a grating of iron at the extremity, about three feet square to suppress flame by pressure. Almost every house has earthen pots, filled with water, on the roof, and a particular class of people whose business it is to prevent and extinguish fires, perambulate the streets during the night.

The Maywoon's habitation, though not at all a magnificent mansion for the representative of royalty, is, notwithstanding a building of much respectability, compared to the other houses of Pegue, from an outside view we judged it to be roomy and to contain several apartments exclusive of that in which he gives audience: it possesses, however, but few ornaments. Gilding is forbidden to all subjects of

the Birman empire; liberty even to lacker, and paint to pillars of their houses is granted to very few: the naked wood gave an unfinished appearance to the dwelling of the Maywoon, which, in other respects, seemed well adapted for the accommodation of a Birman family. South of Pegue, about a mile beyond the city walls, there is a plain of great extent, for the most part overgrown with wild grass and low brushwood, and bare of timber trees except where a sacred grove maintains its venerable shade. A few wretched villages are to be seen, containing not more than twenty or thirty poor inhabitants. Small spots of land have been prepared by the peasants for tillage, who seem to live in extreme poverty notwithstanding they possess in their cattle the means of comfortable subsistence; but they do not eat the flesh, and I was told what is remarkable enough, that they seldom drink the milk. Rice, gnapee, a species of sprat which, when putrified, is made into a pickle, and used as a seasoning for their rice, oil expressed from a small grain with salt, are almost their only articles of food. Their cows are diminutive, resembling the breed on the coast of Coromandel; but the buffaloes are noble animals, much superior to those of India. I saw here, for the first time, some of a light-cream colour; they are used for draft and agriculture, and draw heavy loads on carts or small waggons, constructed with considerable neatness and ingenuity.

The only article of consequence manufactured at Pegue is silk and cotton cloth, which the women weave for their own and their husbands' use. It is wrought with considerable dexterity, the thread is well spun and the texture of the web is close and strong; it is mostly chequered like the Scotch tartan. They made no more than what suffices for their own consumption.

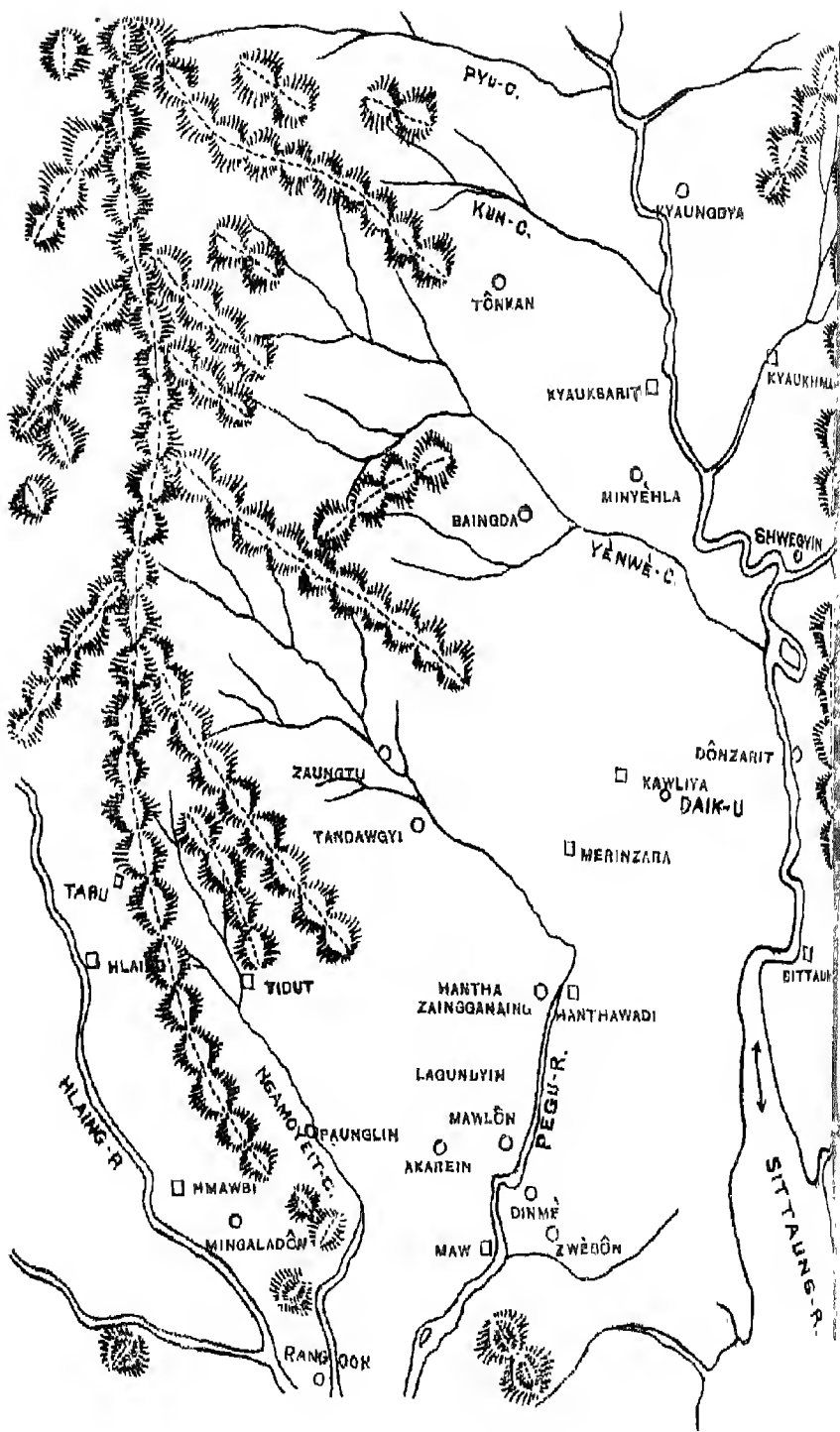
In the town of Pegue there are only three persons, besides the Maywoon or viceroy, whose rank entitles them to distinction: these are, the Raywoon, Chekey, and the Sere-dogee. The first is an old man turned of seventy still vigorous and active, who, it seems, had distinguished himself by his prowess in former wars and obtained his present post as the reward of valour: he is also invested with high military insignia and has the privilege of wearing on his head a gilded helmet, or bason, which is never used except on state occasions when he exhibits for a formidable representation of the meagre knight adorned with Mambrino's helmet. The chekey is a middle-aged man, dull and

plethoric; and last in office, our acquaintance, the seredogee, about forty, sadly affected with the rheumatism.

These officers exercise the function of magistrates and hold separate courts at their own houses, for the determination of petty suits; each has his distinct department; but this private jurisdiction is very limited; all causes of importance relating to property and matters of an high criminal nature, are solemnly tried in open court. The three before mentioned officers unite, and form a tribunal, which sits at the Rhoom or public hall of justice, where they hear the parties, examine witnesses and take depositions in writing; these depositions are sent to the Maywoon, who represents the king and the judges transmit their opinions along with the evidence which the Maywoon either confirms or rejects, as he thinks proper; and in cases of capital conviction, orders execution, or pardons of culprit. From his judgment there lies no appeal, except when it happens that an offender, who holds an office under a royal commission, is brought to trial; in that case the minutes of the evidence taken in court, must be forwarded to the council of state to be by them submitted to the king, who himself applies the law, and awards the sentence."

II. "Shortly after our arrival (at a village south of Pegu) had been announced the Miou-gee, or chief person of the village, came to pay his respect; he informed me that at this season of the year his village, and those adjacent, were nearly deserted by men, who were all sent on the service of government, to make salt by the seaside, leaving their wives, children, and aged parents at home. The articles of salt produce a considerable revenue to the state: the peasantry are employed in preparing it during the hot season: as soon as monsoon sets in, they return to their habitations and till their lands until the time comes round for a renewal of their annual labour on the coast which does not occupy more than four months in the year.

How much it is to be lamented, that the country we had just left, one of the fairest and most healthful on the globe, should remain, for the greater part, a solitary desert, whilst so many of the human race are condemned to languish away life in noxious regions or extract by incessant labour a scanty subsistence from a barren soil. The natives of the adjacent islands of Nicobar, whose swollen limbs and diseased bodies evince the pestilential atmosphere they breathe, might here prove useful members of general society, live in the enjoyment of a salubrious climate, supply



their own and contribute to relieve the wants of others. But it must require a long and uninterrupted term of peace to renew the population of Pegue. Should it ever be so fortunate, there can be little doubt that Pegue will be numbered amongst the most flourishing and delightful countries of the East."

The Domesday book of 1145 and 1164 B.E. is another rather important contemporary document. Unfortunately only the text of the thugyis' reports has been preserved and the statements of population which were attached to them appear to have been lost. In very few cases was a report submitted on the first occasion, in 1145 (1783 A.D.). Most of the myos were then "big forest and long grass (မောကြီးမြင့်ရှည်). Many of the old "32 towns of Hanthawaddy" had disappeared altogether and are only mentioned as a matter of historical interest by the thugyi of Hanthawaddy. Those which survived in 1164 are shown in the following list, with particulars of population where given:—

Hanthawaddy, *i.e.*, Pegu.

Kawliya—population 524 Karens and Zabeins. (The latter are now known as Yabeins in Pegu but in Yamèthin the Z sound is still preserved.)

Maw—now in Insein district; Dabein was in their myo.

Tandawgyi—population 1,510.

Paunglin—population 1,302.

Zaungtu—

Tidut.

Mawlôn—included Kawchè and other four villages.

Zaingganaing—waste.

Merinzara—

Akarein—population 125.

Zwèbôn—population 4,717.

Dinmè—population 520.

Lagunbyin—population 171.

Minyèhla—

Kyauksarit—

The map, which appeared in the Burma Research Society's Journal for April 1915 and is here reproduced, shows the position of those towns which have been identified.

The following translation of the thugyi's report for Kawliya myo will give a fair idea of the contents of the Sittan in general and of the state of Pegu district at the time:—

" 1164 the 9th day of the waxing moon of Tawthalin. Statement of the Kawliya Headman Byinnya Einda Kyaw, holder of a royal appointment order, born on aged 55. The boundaries of Kawliya myo of which I am in charge are—

East.—The Talakwa land of An myo 10,000 fathom distant as far as Kyaikpalekwa pagoda.

South-east.—The course of Talanun creek, Sittaung myo jurisdiction as far as Kamatapaw.

South.—The territory of Hanthawaddy myo, which is 10,000 fathom distant, as far as Kyaiklabo pagoda which is known as Kyaiksagaw pagoda.

South-west.—Tandawgyi myo territory.

West.—Zaungtu myo territory at a distance of 15,000 fathom, as far as Kyaikdeba pagoda.

North-west.—Yènwè myo territory.

North.—At a distance of 20,000 fathom the Wadawgyi, Tònkan, Yènwè, Yehla lands as far as Kyaikpunta.

North-east.—The Shwegyin lands as far as the Four Banyan Trees.

Within the fourfold and eightfold boundaries, there is no cultivation save what is to be mentioned. There are no gardens, coconuts or toddy palms. Karens and Zabeins living within Kawliya jurisdiction on the Bawni, Pwedamaw, Mayan, Kawliya, Baingda, Putkya, Sat, and Kya creeks pay revenue at the following rates per household per annum:—*Zabeins* regular revenue Rs. 10; per bundle of silk brought to market Re. 1. *Karen's* regular revenue Rs. 9; per bundle of silk brought to market nine *mus*. We the *myothugyis* having given notice and collected the revenue are in the habit of paying it to the Revenue Wun, and Revenue Clerks of Rangoon. There are fifteen fisheries including Kadôk, Pagaing, Malaka, Apakaing, Baingda, Taungmin, Pyuntaza, Dayekaya, Aseingalat, Kayet lettet. Persons working the fisheries pay as follows:—Revenue three pieces of *ywetni*; clerk's fees 1 *mu*; collector's fees 1 *mu*. Kaing cultivators pay per holding, regular revenue Re. 1. Dry paddy cultivators pay per yoke of buffaloes 50 baskets of paddy. I, the headman, according to ancient custom, give notice and collect the due and pay to the *myosa* if there is one. If not, to the Revenue

Wun and Revenue Clerks. As for the commission of the superior wun, law fees, dead elephants and horses, fees on import of buffaloes, oxen, teak and horses, I take order for the collection of the money and pay half to the *myoza*, if there is one. The other half I retain. If there is no *myoza* I pay half to the court in Rangoon. In my jurisdiction there are ordinary revenue paying households 40; Yabein households 40 and Karen households 62; total 142. The total population including relations and children is: grown men 187; grown women 181; boys 101; girls 55; total 524. These are exhibited in the tables and abstracts. If there are any omissions, I will submit to criminal punishment."

Except salt-boiling all the occupations pursued by the inhabitants of Pegu are referred to in the above report. In some of the others we hear specifically of Burmans, Talaings and Kalas in addition to Karens and Zabeins. Some of the southern towns had to pay their revenue in paddy into the Royal granary at Pegu. As is implied in the reports, revenue continued to be paid as it had been in the Talaing times. The system of government by *myothugyi* had probably also been inherited but of this no definite evidence has yet been produced. In Amherst a *tailkthugyi* is a Kong and a village headman a *Kawmati*. The latter is apparently the English word Committee: it is not, however, a modern introduction for it occurs in old songs. San Germano has something to say of the natural products of Pegu but is uncertain when he is talking of Pegu district and when of Ramanya in general. The western side of the Yomas appears to have suffered much less from Burman rule than the eastern or Pegu side; there are many old villages on the Hlaing, for instance, which neither Talaing nor Burman invader ever dislodged. In Pegu, on the other hand, the old villages, such as Shweban, Kamanat, Saingde, and others further afield have traditions of several exoduses and returns and it is unlikely that in San Germano's time they produced anything more than enough to supply their own wants. The old exports of Pegu district at this time were sea-water salt which was preferred to that of Shwebo, a little rice for the Royal consumption, fish in various forms, possibly also betel leaf from the Karen *taungyas*. Crawford mentions the forests of Sarawadi as exporting teak for Rangoon and foreign countries; nothing is said of the Pegu forests. No coined money of any description was used in any part of the Burman Empire (Crawford, page 433). The circulating media were gold, silver and lead, which had

to be weighed and assayed at every transaction. Crawford's later chapters are full of interesting information about trade and agriculture in Burma in the beginning of the 19th century but it is hardly necessary to extract them here.

During the first Burmese war the disaffection of the people of Pegu caused uneasiness to the Burman government and effective measures were taken to prevent their aiding the British forces (Phayre, 242). After the war, there was a Talaing rebellion which continued for several years (Kôngbaung-zet, page 1026). The "pacification" of the rebellious provinces doubtless led to the emigration to British territory mentioned by Crawford and others. In 1841 King Tharrawaddy made a visit to Rangoon. Thence he is said to have visited Pegu, but according to traditions, he spent only a few hours there. The Kônbaung-zet history (page 1204) records that he went often to Syriam, Dala, Pegu and other places and worshipped at the pagodas there. His visit was probably intended to conciliate the Talaings. Tradition says that he showed himself affable to all classes and did not insist on all the deference which he would have received in his own capital. His manliness and hardihood impressed the people; a skilled elephant rider, he would set off on his own elephant on the coldest mornings clad only in a *paso* much to the disgust of his attendants who were obliged to wear equally scanty clothing.

A narrative of the second Burmese war will be found in Laurie. He gives an interesting account of the defence of the Shwemawdaw Pagoda by Major W. Hill of the 1st Madras Fusiliers against repeated attacks by large Burman forces. The arrival on 1st December 1852 at about 3 in the afternoon of 216 carts carrying some 2,000 Talaings with their goods and chattels, was an embarrassment, for the wailing of children made it impossible to detect the approach of an enemy. A stockade was afterwards built for them at the foot of the pagoda hill. Relief came early in January 1853. On the Shwemawdaw pagoda platforms are still preserved the *sayats* used by the troops as barracks and two nameless graves of British officers who fell there during the investment. Mention should be made of "Maung-laung, the Talaing Chief" who was with Major Hill in the pagoda throughout the operations.

Troops appear to have been left in Pegu for a few years after the annexation. Pegu was now to see no more of warfare. Its waste jungles were rapidly repeopled, in the south by their ancient occupants or Talaing immigrants.

from Thatôn, whose descendants still speak the Thatôn, not the Pegu dialect of Talaing—and in the north by Burmans, Shans, Taungthus and Karens from the Toungoo hills. The result is that at the present day Pegu contains representatives of almost every race in Burma, not to mention Indians and an occasional Siamese.

After the annexation of the Province of Pegu, the British Government was much exercised as to the sparsity of its population. Various theories were advanced to account for this and various remedial measures suggested. Those that were really efficacious may be briefly summarized. The bunding of the Sittang prevented its overflow into the great hollow between it and where the railway now runs and would have been still more beneficial had the training of the hill streams been, as was originally intended, undertaken as part of the protective scheme. The construction of the Rangoon-Toungoo road crossing the Pegu river at Pegu and various branch roads, the making of the Pegu Canal in 1878 and the building of the Toungoo railway in 1884 threw open the "Pago Kwin" or plain of Pegu to the eager immigration of Talaings from Thatôn, Burmans from up-country, Shans, Karens, Taungthus, and to a limited extent Indians. The settlements of these last on the Milne and Nepean Grants are described in Chapter X.

British
annexa-
tion of
Pegu to
1883.

The rapid repopulation of Pegu need not be attributed entirely to the justice and statesmanship of the local administration. It was the opening of the Suez Canal in 1869 that first brought Burma in contact with the European rice market. The establishment of rice mills at the principal ports followed and of course gave a great impetus to paddy cultivation in Pegu as well as other districts. Much heavy jungle cutting had to be done more especially in the north of the district and the local malaria which is of a virulent type took a heavy toll of the hardworking pioneers.

The rapidly growing importance of Pegu is shown by the numerous administrative changes which have affected it since the British occupation.

It is difficult to trace the history of the district in the early days after the annexation of the Province of Pegu in 1854, but before 1883 the present Pegu and Dabein subdivisions were part of the Hanthawaddy district, while the Nyaunglebin subdivision formed part of the Shwegyin district.

The old Rangoon District had for the purposes of the Criminal Procedure Code been divided into the district of

the Town of Rangoon and the District of Rangoon by Government of India's Home Department Notification (Judicial) No. 248 of 12th February 1874, while Government of India's Judicial Notification No. 1243 of 31st October 1879 made the division for all purposes and changed the name of the District of Rangoon to that of Hanthawaddy.

The District Library contains no copy of the *Burma Gazette* earlier than 1873 though the Indexes go back to 1867 and the actual boundaries of the Rangoon, Shwegyin and Toungoo Districts are not traceable in the gazette after 1873, but the *British Burma Gazette* says that the Bawni Circle of the Nyaunglebin subdivision was at one time in the Toungoo district, while by Judicial Department Notifications Nos. 59, 60, 64 and 65 and Revenue Department Notifications Nos. 52 and 53 all of 14th June 1877, the portion of the Pegu township of the Rangoon district which lay north of the Pagaing bund and east of the Toungoo road was transferred to Shwegyin township of the Shwegyin district, in exchange for the portion of the Sittaung township of the Shwegyin district west of the Pegu-Sittang canal which was transferred to the Pegu district, the various notifications effecting the exchange for all purposes.

To mention one more piece of early information, the index for 1868 states that the Pegu subdivision was to consist of the townships of Pegu, Zwaybone, Zyneganine, Paunglen and Akaring and that the headquarters of the Myoök of Pegu were to be at Akhawa. The history of the district after 1883 is given in Chapter I.

CHAPTER III.

The People.

Popu-
lation.

No census has been taken since the district assumed its present form. The population of the present district can however be determined correctly for 1911 and with sufficient accuracy for the years of preceding censuses:—

Year.	Population of present district.
1872	95,700
1881	159,500
1891	204,700
1901	293,100
1911	370,416

Some of the increase is due to accretions to the area. The

rapidity of increases has been exceeded in Lower Burma only in two districts, Myaungmya and Pyawbôn. The density of population is however still considerably less than in other Lower Burma districts to the west and south, owing to the large stretches of hills and marshes. There is some reason to believe that there was a temporary set-back to the growth and prosperity of the population in the disturbed years immediately following the annexation of Upper Burma.

The population in 1911 excluding Hlègu is over 30,000 more than that in 1901 including Hlègu.

The great majority of the population is rural. There is one municipality, Pegu (population 17,104), with a notified civil station, and one other urban area, Nyaunglebin, (population 6,642), and 42 other villages of between 1,000 and 5,000 inhabitants. The following have been notified as towns:—

Distribu-
tion of
popula-
tion.

Tôngyi, Tawa, Tawa Lock, Kawa, Thanatpin, Payagyi, Pyinbôngyi, Kadôk, Paungdawthi, Daik-u, Pyuntaza, Peinzalôk, Kyauktaga, Pènwègôn.

Pegu is the old capital of the Talaings, and there is probably a large strain of Talaing blood in the Burmese population of the district. It is however impossible to determine how large this strain is, as there are no well defined racial differences between the two races. The Talaing has a more hairy face, and this characteristic is often met with in villagers who have forgotten their Talaing strain. Only 48,809 persons gave their race as Talaing in 1911, as against 276,756 Burmans. The Talaing language is practically unknown in the district, as it was proscribed after the conquest of Pegu by Alaungpaya in 1757-58.

Race.

Besides the old Burmese and Talaing population, there is a large number of colonists from Upper Burma and Tharrawaddy and their descendants. Upper Burmans continue to immigrate and settle.

Burmese including Burmanised Talaings form the large majority of the population. In the Yomas there are many Karen villages, chiefly Sgaw Karens. There are also Pwo Karens in Kawa township and throughout the district. Karens from the eastern hills who came down for work and married and settled down are found in most of the villages. Other Burmo-Thibetan races found are Yabeins, Shans, Taungthus, and Chins, none of whom are very numerous, although the Shans in early days played an important part in opening up the land agriculturally. Except the Yabeins they are probably colonists. The

Yabeins are found in the hills chiefly in the north-west of the district, and usually claim to be Burmans. The Chinese number 5,509 * and have always been fairly numerous in the district. Most villages of any size have a Chinese shopkeeper, and the paddy broking is chiefly in their hands. A few Chinese rice cultivators and market gardeners are also found.

There are over 41,000 * Indians, or nearly 10 per cent. of the whole population. Most of them are Madrassi Tamil cultivators, but many are traders, coolies, etc. The chetties are also an important class. Many of the Tamil cultivators started as coolies on Government embankments, canals, railways, etc., and afterwards settled down and acquired land. Indians are most numerous in the towns and along the Pegu-Sittang Canal, but are well distributed over the whole plain. In some of the areas under Grants and Leases Indian cultivators were imported by the grantees. The area leased to Mr. Mylne was originally worked by Biharis imported from India, but new settlers are now all Uriyas who come from India on their own responsibility. In 1911 994 Zerbadis were returned, and the number of Kales is probably greater. The few Europeans (151) and Eurasians (175) belong chiefly to the official (including railway) class. A few belong to timber and other firms.

Religion.

In 1911, out of 370,416 inhabitants, 318,827, or 86 per cent., were Buddhists, comprising practically all the Burmans, Talaings, Shans and Taungthus. The Karens are Buddhist, Animist, and Christian, there being American Baptist Missions at Pado near Nyaunglebin and Intagaw in the Kawa township. There is a Roman Catholic Mission at Nyaunglebin, with a good brick church. The district contains about 8,000 native Christians, the large majority being Baptists. The Hindus number 31,822, or 8.6 per cent. of the whole population, and about five-sixths of the total Indian population. The Mahomedans are found chiefly in towns. The number of Indian women is small, and the Indians marry freely with the Burmese.

Immigration.

The immigration from India, of Chinese from the Straits, and of Burmans from Upper Burma and Tharrawaddy still continues. In 1901 the number of persons enumerated in the district who were born outside it was 110,712, of whom 89,511 were born in other Burma districts, 19,043 in India, 2,139 in other Asiatic countries, and 19 elsewhere. In 1911 the immigrants numbered 132,430; and taking the natural

* Figures are for the old district in 1911.

increase for the decade at 12 per cent. (40,388), accounted for more than half of the total increase of population (89,549). If three-fourths of those enumerated in 1901 were left in 1911, there would be 49,398 new immigrants, which agrees with the figure (49,161) got by subtracting the natural from the actual increase. Again the proportion of Hindus and Mahomedans to Burmans rose from one-fourteenth in 1901 to one-tenth in 1911, in spite of their natural increase being smaller owing to scarcity of women. In the 1911 census report the following remarks occur :—"The actual increase of population (in the Pegu district) is greater than that of any of the other regular districts of the province. Its immigrants, 132,430, number more than those of any other district except Rangoon. The diminution of its rate of increase from 43 per cent. in the previous decade to 26 per cent. for the period 1901-11, and the cultivation of 83 per cent. of its culturable area, indicate that it has approached its limits of rapid expansion and that henceforth its increase will be approximate to the natural rate of 12 per cent. for the decade."

In addition to colonisation there are large yearly immigrations from Upper Burma of agricultural labourers at the beginning of the ploughing and the carting seasons. This immigration is largest in years when the season is bad in Upper Burma. The labourers return home at the end of the season.

There is very little emigration.

The type of house is best up in the timber working villages of the Pegu valley, where good money is earned and good timber procurable. The houses there are usually roofed with corrugated iron. Good timber or even masonry houses are also found in the richer villages elsewhere, such as Ōnhnè, and in most villages one or two superior houses can be seen. In the greater part of the district the usual type of house is very poor and requires frequent renewal. It is built of bamboo and roofed with salu leaf sometimes improved by mixing with thetkè, or with thetkè alone. Salu is plentiful, and thetkè, not of a very good kind, is not scarce. Wagat and dani are not much used. Corrugated tiles are not uncommon in towns; Cæsar Frederic mentions finding the houses in Pegu roofed with them. In the towns superior houses are common.

Emi-
gration.
Houses
and
villages.

After threshing is completed, carts go to the foot of the hills for the year's supply of salu, firewood, banbwe leaf and *ka-aung* for cheroots, etc.

Many of the villages are overcrowded and have no room for expansion. Fires are not infrequent.

Most villages are well supplied with wells, tanks and shady trees, and have small orchards round the houses. Many have brick footpaths and bridges. Pagodas, kyaungs and theins are frequent as in the rest of Burma.

The Indian cultivators usually live in bamboo and straw huts in their fields all the year; Burmans live in the fields in the rains only.

Furniture. Household utensils are of the usual simple type common to the rest of Burma. Most houses have their own hand-mill for grinding rice.

Clothing. In the poorer parts cotton lÔNGgyis and jackets and cotton or silk gaungbaungs are all that are worn, and the women have no scarf. Sandals and umbrellas are rare in some villages. Elsewhere a silk *paso* or lÔNGgyi is bought every year or so for holiday wear, and sandals and umbrellas are considered necessities. Kamauks are often worn in the fields.

Food. The people are seldom hard up for a meal of rice. Cattle are little slaughtered for food, and meat is hard to get. Vegetable curry, ngapi or fish, which is plentiful, are the usual opsonia. In the jungle snared jungle fowl, cat, etc., often come to the pot. Indians dig up the ubiquitous rats for a delicacy. In most parts the villagers can afford sesamum oil for cooking, but in some parts the cheaper groundnut oil is perforce used. The usual condiments are eaten. Betelnut and leaf are of course necessities. There are very few toddy trees in the district; kazawye is the most common liquor drunk. The betel leaf wrapper is most commonly used for cigars. Tea, tinned milk, biscuits, etc., are luxuries seldom enjoyed by the ordinary cultivator.

General prosperity.—This differs greatly from tract to tract. It is probable that the people are everywhere better off than in Burmese times, and that the increased security and rise in the value of paddy more than counterbalance the increased taxation and cost of necessities, such as bamboos, firewood, etc., which used to be free. In Nyaunglebin subdivision the imports of food and clothing, etc., per head increased from 385 lb. a year in 1902 to 503 lb. in 1911. Of course increase in exchange does not necessarily connote increase in wealth, but in this case there has perhaps been some advance in comfort. All the settlement reports from 1883 onwards describe the people as generally well off, and give instances of the purchase of sardines and other

European luxuries in support of this view, though Captain DesVœux (1898) notes that the type of house in Nyaunglebin subdivision is poor. The advance in prosperity discernible from report to report is not great. The Settlement Officer Captain Parrott in 1884 wrote "any person who will only work, even up to an average standard, can become extremely well off." This is certainly not so now; perhaps it was not a correct view at the time. European luxuries are still sold in the village shops, and money for gambling, pwès, etc., is not scarce. In most of the larger villages prostitutes make a living.

Taxes are collected without difficulty, and there is little desperate poverty. The number of well-to-do people has undoubtedly increased steadily, but as in the rest of the civilised world, improvement in the condition of the mass of the people is doubtful. Rack-renting has increased with the rise of the chetty and absentee landlord.

Recreation grounds have been reserved in some of the towns and large villages, but many are little used and some are liable to flooding. Bullock, buffalo and cock fighting seem to be more common in Nyaunglebin subdivision than in Pegu, and so are pony and cart racing. Amusements,

CHAPTER IV.

Agriculture and Irrigation.

All but a small minority of the people are supported by agriculture, almost entirely rice-cultivation. The next crops in importance are sesamum, tobacco, a little betel-vine near Pegu town, vegetables, sugar and other miscellaneous crops. Most of the sesamum is grown in the flooded tracts and is of the flooded variety. Mangoes are the chief fruit-trees grown. Most of the Indian vegetables have been introduced by Indians, but are not grown on a large scale. Tapioca and other such crops have been tried, but not successfully. Rubber is being tried on a small scale. General.

Fishing, timber-working and pottery, the only other directly productive industries, are small compared with agriculture, which in 1901 directly supported 68 per cent. of the population. In 1911 the percentage was 74.

Even before the constitution of the district in 1883, the increase in cultivated area had been marked. In the area Area under cultivation.

settled in 1883-84, comprising a large part of the Pegu subdivision and some of the Hanthawaddy district; figures are given for the area settled showing that the area cultivated increased steadily from 102,000 acres in 1870-71 to 205,000 in 1881-82. The area under settlement occupied for paddy cultivation in Kawa and Payagale townships increased as follows:—

				Acres.
1884	...	...	...	306,000
1889	...	...	...	322,000
1894	...	...	...	384,000
1899	...	...	...	405,000

The increase was chiefly in the Payagale township. The Nyaunglebin subdivision was also developed rapidly before inclusion in the district. In 1880-81 the area cultivated was 26,000 acres. In 1887-88 it was over 40,000 acres. In 1897-98, two years after its inclusion in Pegu district, the *thugyis'* registers showed 120,000, and the stricter settlement survey 132,000 acres, or five times that recorded for 1880-81.

From 1899 onwards there was a great rush for land, and special grant-officers were entertained.

The cultivated area of the old Pegu district in 1901-02 was 713,017 acres, which increased to 862,292 in 1910-11. It rose till 1908-09, after which it fell slightly owing to a breach in the Pagaing bund, the effects of which are still felt. There is now little good land left for expansion, over nine-tenths of the culturable land being already occupied, and unless flooded land is reclaimed or reserves thrown open there is very little land left worth occupying. Unfortunately the expenses of clearing jungle land are so heavy that such land does not often remain in possession of the original pioneer, but goes to his creditors. Much of the land most lately cleared in Pegu township is in the hands of a few well-to-do owners.

Sales and
mortgages.

In the Pegu subdivision at settlement 1882-84 "land can hardly be said to have a market value." The price at recorded sales of paddy land was about Rs. 2 to Rs. 10 per acre and the mortgage rate about the same. In 1898-1900 it was about Rs. 15 to Rs. 20 and the mortgage rate slightly less. The sale value has now risen to about Rs. 47. In the Nyaunglebin subdivision at the settlement 1897-98 the value of land was increasing. Figures are given showing that it averaged about Rs. 17.11 in 1893 and Rs. 18.46 in 1896. The mortgage rate was slightly less. In Bawni

circle the sale value increased in the four years preceding settlement from Rs. 8.69 to nearly Rs. 18. At the settlement of this subdivision in 1911-13 the sale value had risen to Rs. 46.83 and the mortgage value to Rs. 30.6 but the frequency of sales had decreased a little. In 1893 to 1896 about 4.36 per cent. of the land had been sold each year. The annual percentage sold had dropped again at re-settlement to 2.55. For the old district the following are the figures for recent years :—

...			Area sold.	Average price in rupees.
1903-04	...	...	65,534	30
1904-05	...	...	72,605	34
1905-06	...	...	72,860	40
1906-07	...	...	73,653	41
1907-08	...	...	79,631	45
1908-09	...	...	61,235	46
1909-10	...	...	51,512	44
1910-11	...	...	47,913	47

Land is usually mortgaged as a security for a loan, usually for agricultural purposes. Such mortgages are without possession.

Most cultivation is done on borrowed capital at interest of about 1.8 to 4 or even 5 per cent. per month repaid when the crop is sold.

Debt.

There are 29 agricultural co-operative credit societies chiefly in Nyaunglebin subdivision which are said to tend to reduce the rates of interest locally. Their capital is Rs. 73,000. There are also urban societies at Daik-u and Nyaunglebin. The development of co-operation has not yet been pushed in the district.

No great change in the general fertility of the district appears to have taken place, though of course most of the land has passed through its short period of maximum fertility, and kauklat crops have largely replaced kaukkyi. In Pegu subdivision especially round Pegu, the soil is exhausted. The Nyaunglebin subdivision as a whole is more

Fertility.

fertile than the Pegu subdivision. The outturns assumed on various classes of land in the district at settlements range from 60 to 18 baskets, while on specially favoured fields outturns of 70, 80, and even 90 baskets have been recorded.

The Nyaunglebin subdivision exports over 30 baskets of paddy per cropped acre by railway.

Prices.

The prices in the district are extremely sensitive to changes in the Rangoon market. Most of the village baskets are slightly larger— $\frac{64}{4}$ being a common ratio—than the Government basket and grain is usually heavier than the standard of 46 lb. for 9 gallons. Consequently in the markets in the south of the district the price in village standards is sometimes as high as the Rangoon quotation or even higher. In the north of the district the difference goes up to Rs. 13 to Rs. 20. Most of the brokers are Chinese.

Classes of agriculturists. Tenancies.

Agriculturists are either grantees, state-lessees, landlords, peasant-proprietors, tenants, or hired labourers. Grants, leases, and pottas will be dealt with in Chapter X.

In the tract settled in 1883-84, which may be taken as showing the state of affairs in the Pegu subdivision at that time, out of an area of paddy land of 222,713 acres, 53,802 acres were cultivated by tenants, who numbered 2,989.

Of these however 954, cultivating 15,117 acres, were not true tenants, as they worked the land of others on payment of the revenue only. The average area rented in Kawa township between 1883-84 and 1898-99 was 37 per cent. For 1898-99 the percentage was 41.44, and was highest in the tract most recently brought under cultivation.

The area resettled in 1899-00 was chiefly in Payagale township. The percentage of occupied land in that area rented in 1898-99 was 25 per cent. as against about 16 per cent. at settlement in 1883-84*.

The northern subdivision was developed later, and it appears that the original tillers of the soil failed to keep it in their possession. The settlement report of 1897-98 says:—

"Numbers of landowners, using the term landowner in a broad sense, have of late years moved into the railway towns and taken to petty brokering and kindred trades, and they let their holdings out yearly at high rents to the ever increasing number of immigrants. These latter generally come down with little or no capital, and many of

* Note.—The 1899-00 settlement report gives the 1883-84 percentage as 26 for the area settled in 1883-84. This appears to be a mistake. The percentages were 12 of occupied and 16 of occupied paddy land.

them have to hire cattle. To enable them to do this and to pay their cultivation expenses generally, they take advances on their crops from brokers, often their own landlords, at extremely low rates, Rs. 40 to 50 per 100 baskets as a rule."

(The "low rates" are of course sabape rates, and low in the landlord's favour, and high from the tenant's point of view.)

As the percentage of paddy land let at settlement was 43, and of paddy-land let at unprivileged rents 42, at a time when the occupied area was increasing by leaps and bounds, it is obvious that most of the land so rented was really broken by the tenants under the thumb of the "land-owners in a broad sense."

In the Bawni circle settled in 1899-00 the percentage of paddy land held by tenants was 40, and by true (unprivileged) tenants 39, and this in a tract which was only beginning to be opened up.

At the revision settlement of Nyaunglebin 1911-13, 49 per cent. of the total occupied area was found to be worked by tenants, and 45 per cent. by true tenants, a slight increase over the figures of 1897-98.

About 1899 the district percentage of paddy land rented to true tenants was 35, and was higher in Nyaunglebin than in the Pegu subdivision. The following are the figures for more recent years taken from statement 12 of the Revenue Administration Reports:—

Year.	Area occupied.	Area at full rents.	Percentage.
1903-04	814,249	295,503	36
1904-05	840,603	278,730	33
1905-06	867,579	299,751	35
1906-07	889,222	330,946	37
1907-08	911,423	346,203	38
1908-09	923,052	374,218	41
1909-10	865,159	342,787	40
1910-11	871,774	394,758	45

Kinds of
tenan-
cies.

Together with the steady increase in area rented, there has been a change in the nature and conditions of tenancies. The old system of paying one-tenth of the produce was generally followed in the Pegu subdivision at settlement (1882-84). In many cases an amount of paddy, one-tenth of the estimated produce, was agreed on beforehand, and in other cases one-tenth of the actual crop after threshing was paid. The tenant paid the revenue. In some cases the metayer "tawetsa" system was followed.

The tenants paying rent and revenue were about 7 of the total. A few of these hired cattle of the owner also. Next came nominal tenants, paying revenue only, about 25 of the total. The remaining 65 paid rent only. The incidence of rent per acre rented was Rs. 3.83.

At resettlement in 1898-00 practically the whole of the true tenants paid a fixed rent only, being about one-fourth of the gross outturn. These rents are characterised as rack-rents, though as will be seen the landlord has since contrived to squeeze more still. The average rent per acre held by true tenants in Kawa Township (1898-99) was Rs. 5.67, and in the area resettled in 1899-00, Rs. 7.13. The average rent paid by tenants who had no land of their own as well, was Rs. 88.47, paid as now in paddy.

In the Nyaunglebin subdivision at settlement, 1897-98 and 1900-01, tenants paid a high produce rent, which was already approaching a rack-rent, of Rs. 77.23 and (in the Bawni circle) Rs. 5.95 per acre, being just under one-fifth of the gross outturn.

At present over the whole district the ordinary tenant rate, still paid in paddy, is from '33 to '40 of the gross produce, and the average incidence per acre about Rs. 11.

Until recently tenancy agreements were almost universally made verbally from year to year, and the only document signed was the report to the revenue surveyor. During the last two years a form of tenancy agreement introduced by chetties has spread into fairly general use, especially along the Pegu-Sittang canal. By it the tenant agrees to work merely as agent or cooly of the owner, and to receive as wages the surplus produce over the amount agreed on (as rent). The use of the word rent is carefully avoided in the document, and the tenant purports to contract away the legal advantages of a tenant, has no proprietary interest in the crop till the landlord has taken his share (rent) and thus made over to him the rest of the crop as "wages".

The landlord incurs no expense to set against his rent unless bunding on a large scale is necessary, in which case the landlord bears the cost. Rent is usually paid on the tenant's threshing-floor.

Tenancies are almost always from year to year, and are usually entered into just before the ploughing season. Sometimes delay in ploughing is thus caused, or land left uncultivated because no tenant can be found to take the land at the rent demanded. There is no custom by which the outgoing tenant has an option for the succeeding year.

Duration
of tenan-
cies.

Between settlement in the Pegu subdivision, 1882-84, and resettlement, 1898-00, the proportion of tenants who had worked the same holding for more than five years increased largely, being about 1 in 3 at resettlement.

In Nyaunglebin in 1897-98 only 3.69 per cent. of the tenants had worked the same holding for five years or more and 60 per cent. had worked their holding for one year only. In Hanthawaddy district the latter percentage is 43. In Pegu subdivision the tendency to increased permanency indicated in 1898-00 was not maintained, and about half or more of the tenants have worked their holdings for one year only.

Many tenants have also holdings of their own, and rent land from others in order to employ hired labour and add a little to the profit from their own holdings. These are in a fairly good position, as they can be independent of landlords if they choose. There can be no doubt however that the pure tenant has a hard struggle to make both ends meet.

Condition
of
tenants.

In the Nyaunglebin resettlement report 1911-13 it is stated that there are no signs of rack-renting, but the rent, whether considered as proportion of gross produce, or in baskets per acre, is shown to have risen considerably since the original settlement, which gives a very unfavourable description of the condition of the tenants.

The 1898-00 resettlement reports describe the rents in Pegu subdivision as rack-rents, and these also have since risen considerably. The facts recorded regarding condition and duration of tenancies show that the position of tenants is very bad. Their household expenses are much smaller than those of landowners, and they have also to cut down cultivation expenses, chiefly by doing more of the work themselves. As rents are about three times the revenue demand, their profits are very much less than those of cultivating owners. They have also to pay higher rates of interest on borrowed money. In a bad year a tenant has sometimes to abandon his crops and implements to the

landlord or other debtors and make a fresh start elsewhere. The social status of the tenant is rather above that of the labourer, and a labourer usually tries to become a tenant when getting on in years, but there is often no great difference in their material prosperity.

Cultivat-
ing
owners.

The causes operating to decrease this valuable class are potent. In the richer or better situated tracts the value of land tempts them to sell the land, or to live on its rent. They are tempted to get into debt and have to mortgage or sell the land. In jungle tracts the capital required to clear fresh land and start cultivation is so large that the land seldom remains in possession of the original pioneer. Recruits to this class come from the cream of the tenant class, who usually buy land from chetties or others on credit or on borrowed capital and try to pay for it out of cultivating profits. They are generally regarded as rent-free tenants of the seller until the debt is paid.

Land-
lords.

The smaller landlords are often men who rent out only a portion of their holdings and work a portion themselves. In other cases they are men the value of whose land has risen and who can live on the rent without cultivating. The larger landlords are either capitalists who find land a profitable investment for money made in trade, money-lending or other occupations, or chetties and other money-lenders who have acquired the land by mortgage or otherwise in quittance of debts due by the previous owner. The chetties usually dispose of their land when opportunity occurs to the rising cultivators mentioned in the last paragraph.

In many circles there are one or two Burmans, often *thugyis*, who have acquired large estates through having capital to lend out to farmers, and who live on the rents. Such men often acquire landholders' rights over adjacent waste by getting others to clear it for them, advancing the expenses, and treating the actual workers as their coolies. After a few years they get good rents for such land. Some of the landowners in the Kawa township, chiefly Talaings, work large estates of over 100 acres themselves. Some of the villages, for instance Önhñè, in this part have long been noted for their fine houses and general air of prosperity.

Owing to evasion of the rules, large areas of pottas have also got into the hands of large landlords. At settlement 1882-84 there were only 30 persons owning land exceeding 100 acres in any circle. In the area resettled in

1899-00 there were 153 at resettlement. The increase was chiefly in the newly developed tracts in Payagale township, showing that the capitalists and not the cultivators were benefiting by the development of the waste. There was one owner of over 100 acres for every 1,234 acres of occupied land. In the tract resettled in 1898-99, including a large proportion of Hanthawaddy district, the proportion was one in 583 acres. In the Nyaunglebin subdivision on the contrary the increase in large estates has been chiefly in the older and better situated tracts near the railway. At settlement in 1897-8 the reason for letting was "holding too large" in 22'63 per cent. of the cases. The principal other causes were "distance from house" 13'02 per cent., "sickness or old age" 19'43 per cent., "owner wishing to trade" 10'20 per cent. and "not a cultivator" 55'63 per cent. At resettlement 1911-13, 2 per cent. of the owners, owning 16 per cent. of the land held over 100 acres each. Eight per cent. of the land was held by owners residing outside the subdivision, and 10 per cent. of the owners, holding 16 per cent. of the land lived in Nyaunglebin town or other railway towns in the subdivision.

The area held by agriculturists has remained fairly constant of late years, while that held by non-agriculturists has increased, the increases being chiefly among non-residents of the circle in which the land is situated. The rules to prevent the transfer to non-agriculturists of land over which landholders' rights have not been acquired, or of land held on grant or lease, have thus failed to keep the land in the hands of present proprietors. The following shows in thousands of acres the area occupied by the two classes:—

Year.	Agriculturists.	Non-agriculturists.	
		Resident.	Non-resident.
1903-04	620	30	95
1904-05	654	35	152
1905-06	673	36	159
1906-07	672	36	181
1907-08	672	38	202
1908-09	672	42	209
1909-10	616	43	207
1910-11	636	49	187

**Labour-
ers.**

The ordinary wages for the ploughing season—three months or rather more—are from 40 to 80 baskets, paid after harvest, and food. An extra man is employed as cook when necessary. The ploughman is expected to help in plucking the seedlings also. For reaping and threshing combined the wages are about the same. Where several labourers are employed the foreman gets rather more, up to 100 baskets or more. The labourers live in a hut on the fields during ploughing. Sometimes the same men are employed for both operations, but it is more usual to hire separately for the two operations. The petty purchases and borrowings of the labourer and his family, if any, have usually to be made on credit at ruinous *sabape* rates of 40 to 50 baskets per Rs. 100. After threshing the labourer is often employed to collect firewood, etc., for the ensuing year. The Indian cultivators usually hires compatriots at a monthly wage of about Rs. 10 for the whole twelve months, with food, clothing and washing. A cook and dhobi are employed for the larger gangs.

The women of the village are hired for transplanting at eight annas to a rupee a day, or by piece work. If the work is close to the village, no food is provided, but otherwise one meal or, if very distant, two meals are provided. The Indian pays an extra two annas instead of food. In flooded land where planting is late and has to be rushed through as soon as possible in September or October, competition puts up these rates. Men plucking seedlings earn about a rupee a day. This operation, and more often reaping, are sometimes done by contract. The contract payment for reaping is often partly in money and partly in husked rice. Sometimes the reaping is paid for by an agreed proportion of the yield, often a tenth, or, with winnowing, a fifth. Burmese ploughmen are considered better than Indians.

Herding is done on a large scale in large grazing-grounds, whither cattle from other districts also find their way. Agricultural labourers supplement their income by working on fisheries, charcoal-burning, thatch-making, etc., according to locality, and by cattle theft.

Most of the labourers are Upper Burmans who return home about February. In years however when the immigration is small, the local labour market shews itself capable of expansion to meet the demand.

Except on one-plough holdings, the greater part of the work, and in many cases the whole of it, is done by the hired labour. The amount of hired labour appears to have gradually increased. In the tract resettled in 1899-00 the labourers were found to be fewer than those working for themselves. In the tract resettled in the preceding year however, which included the large estates in Kawa township, this does not seem to have been the case. Apparently the labourers from Upper Burma, who then, as now, formed the majority, were not included. The Revision Settlement Officer noticed a large number of cases where the sons worked their parents' holdings for hire like other coolies.

The wages in paddy do not seem to have altered much since the earliest settlement records. The average income of the field labourer in Nyaunglebin in 1911-13 was Rs. 124 and in Daik-u Rs. 139. It is higher than that in neighbouring districts except Hanthawaddy, where the figure is higher.

In 1882-84 the use of the plough, *tè*, was rare. At resettlement in 1898-1900 it was more generally used, and the cultivators said they had adopted it recently on account of the soil becoming exhausted. It is more likely that the good results obtained by Shans with the *tè* demonstrated its use and that it was adopted owing to giving improved crops. At that time a *tè* was often drawn after the Shan method by a single buffalo. Nowadays ploughing before harrowing is generally done on most soils, and the single buffalo is not used. Harrowing is very thoroughly done, the ground being sometimes gone over 12 or even 16 times. The number of teeth in the harrow varies greatly.

Methods
of wet
rice cul-
tivation.
Plough-
ing and
cattle.

In the settlement reports, except those for 1911-15, mention is made of the *myetsein kók thi* method of cultivation without cattle by hoeing alone, adopted on new land by struggling settlers. This is not now found, and does not seem ever to have been general.

Ground overgrown with *kaing* grass is sometimes gone over with a *kyandón* or log to break the stems before tilling. After ploughing and harrowing the land is usually finished off with a *settón* or revolving plough. This implement was occasionally used even in 1882-84, but its use was not general even in 1898-1900. In the last few years the American setton, a revolving log with a series of hoes or *kwins* sticking out of it, has largely replaced

the old setton with a number of parallel continuous blades. It costs about Rs. 25 or double the old one, but lasts four or five years instead of two or three.

Where roots are numerous, a large rake or *tun-sekton* is dragged over the land after ploughing. This practice also goes back to the time of original settlement. Ploughing is occasionally dispensed with and the ground kneaded up by driving a herd of buffaloes over it. In many parts of the plain the grazing for bullocks is poor, and the ground very heavy. In those parts buffaloes are chiefly used. Cow buffaloes are occasionally broken to the plough. Where bullocks can be employed they are usually preferred owing to their greater hardiness, except where timber is worked, for which buffaloes are required. Bullocks have greatly increased in proportion to buffaloes. Only about a sixth of the cattle in 1879 were bullocks. In 1898 about two-fifths were bullocks. In Nyaunglebin subdivision in 1902-03, the number of bullocks and buffaloes was the same; there are now nearly five bullocks to two buffaloes. Cows are never broken as in some other parts of the country. Some buffaloes and a few bullocks are bred in the district, but most come from Upper Burma and the Shan States. Shan caravans of cattle penetrate throughout the district. Upper Burma cattle are rather better and cost more.

A large proportion of the cattle used for ploughing are hired, the rate being about Rs. 50 a yoke for bullocks and Rs. 100 a yoke for buffaloes.

The customs regarding hiring and herding are similar. The principle is that the owner bears the loss unless it arises from negligence of the party. Loss from disease, snakebite, or theft from a pen falls on the owner, but the hirer or herdsman is responsible for maiming, drowning and theft from a grazing ground, or for loss from overworking or improper feeding. Damages for loss of teeth through negligence have to be paid at Rs. 5 a tooth.

After and during ploughing buffaloes can usually be herded in a neighbouring grazing ground, but for bullocks grass has often to be cut on the *kazins*. Herding fees for this season are about 3 to 5 baskets per head, but often a herdsman is hired with the ploughmen on a fixed wage of 30 to 60 baskets. Indians do some stall-feeding, chiefly on bran, during ploughing.

Oxen out at pasture are resumed by the owner about Tazaungmôn full moon, and buffaloes after reaping. After

threshing, herding charges when incurred are usually paid in money at about a rupee per head a month. The practice of castration by crushing is general in the district.

There are a few Jhansi and other Indian cattle in the district, but the overwhelming majority are of pure Burmese breed.

The cultivator in this district has always preferred to sow broadcast wherever possible, and except on poor high or very flooded low land seed is usually broadcast first, on flooded land this is often a failure and is followed by transplanting.

Sowing
and
trans-
planting.

Sowing is always done by hand. In the larger fields a stick is put in the middle and the sower circles round it.

Nurseries are always prepared for replanting and patching and deficiencies are made up by buying at about Rs. 4 to Rs. 7 including plucking, per hundred bundles, enough to plant about two-thirds of an acre. In some parts transplanting is replacing sowing broadcast, as it is found that by drawing off and renewing the water in the nurseries every 4 or 5 days the ravages of the *ushau kpo* insect are checked.

The seed is sprouted before sowing in the usual way. Where the seedlings have to be carried any distance a boat or a sledge is used.

Where sown crops grow up too thickly they are thinned out and the surplus used as seedlings for transplanting. A crop is usually raised in the nursery, which unlike other fields is generally manured. In very flooded parts a stick has to be used to transplant and the women have to tuck up their skirts, and the work is slower.

The chief feature of the district is the lateness in many parts of transplanting owing to floods. Many fields cannot be planted till October, and the crops are thus peculiarly dependent on late rain. The poorer cultivator is also at a great disadvantage in the competition for labour at a time when a few days earlier or later makes all the difference.

The mutual help system of transplanting is not followed in the district.

Much importance is attached to the kind of seed sown, though mixed fields are often found owing to patching and other causes. Various sorts of *ngasetin* are the most common varieties of paddy. Most holdings have a few fields of *kaukhnyin* for home consumption. In the most flooded parts *yemanaing*, *yenuwè*, or *tadaungbo* is sown from April to June without sprouting and left till harvest. *Kauklat*

varieties are rather more common than *kaukkyi*. *Kaukyin* is found in very poor soils. *Mayin* cultivation is said to have been carried on at one time before 1882, but true *mayin* cultivation is now unknown though the beds of many of the tanks appear suitable for it.

The following figures apply roughly to the district:—

One basket sown broadcast is enough for one acre.

One basket of seed on a nursery of about half an acre gives about 250 to 300 bundles of seedlings, of about 3 handfulls or 600 plants each. A bundle of seedlings thinned out from fields broadcasted has only some 400 to 450 plants.

One hundred and twenty-five to 150 bundles of seedlings are planted on one acre.

A woman can plant out about 25 bundles a day, or 6 can finish an acre in a day.

The
growing
crop.

While ploughing it is usual to go over the earlier ploughed fields which have already been sown, and cut down the weeds by swinging a long dah. After this no weeding is done. In fairly new land if the plant is too luxurious, the tops of the leaves are sometimes cut off before the plant comes to ear.

If insects attack the crop no measures are taken to save it. The *ushaukpo* seems the most common of the serious pests. The *ywetpyat* also does damage.

In jungle tracts and in flooded tracts where *kaing* grass harbours weaver and other birds, platforms are erected and slings used to scare away marauders. Clappers worked by long strings are also used. Near *gyi* jungle fences are put up. In spite of these precautions birds, especially parrots and elephants, pigs, monkeys and other animals do much damage. Rats in some years do great destruction. To keep them down, sticks are stuck in the fields for owls to perch on. Floods are the chief enemy of the crop in this district, particularly on the borders of the large areas entirely unculturable through floods. In some places it is not uncommon to have to plant three or even four times.

Irrigation
and
bunding.

There are no storage or irrigation works in the district, as the rainfall is abundant. Late in the season some cultivators bund the streams to get ripening water, and at the foot of the hills where the soil is porous sand, some quite large bunds are made across the streams during the hot weather for irrigation. Friction with fishermen and other cultivators is sometimes thus caused. More serious trouble is caused by the bunds put up by fishermen, often in con-

travention of their licenses, which hold up the water and either flood the fields above or dry up those below. The interests of the two classes are continually clashing, especially now that the number of fisheries has been increased. Drinking tanks, etc., are sometimes claimed as included in fisheries, and the fishing licensee being usually a wealthy man has an advantage over the cultivator. Small irrigation cuts along the *kazins* or cattle-paths are found in most *kazins*. All that most cultivators have to do is to open or shut the *kazins* to regulate their supply of water.

It is more important to keep water out than to get it in, and as the beds of many of the streams are above the surrounding land, considerable expense is necessary in bunding the banks. Even a cultivator who does not align with a stream often protects his land by a three or four foot bund. In other cases cuts may be made to the nearest stream to carry off the water when excessive.

Mention may here be made of the system of cultivation recently introduced in the South of Daik-u township by a Karen, which is known as *kaukhnaung* or sometimes as *mayin*. The land is flooded and was left waste. Now it is ploughed and harrowed during the early rains before the floods, which in this part are up to 10 feet in depth. Large areas of poor soil on the fringe of the hills to the west are rented at high rents for nurseries. When the flood subsides in October the land is hurriedly planted up and then irrigated from the hill streams and reaped in January. Extensive and costly irrigation is necessary for this form of cultivation, which is not yet firmly established. Kauk-
hnaung
crops.

Before reaping the standing rice is often bent over by sweeping with a long pole to facilitate reaping. It is reaped just low enough to give a stalk convenient for binding. Most of the straw is burnt after threshing out, chiefly at night while guarding ungarnered sheaves from thieves, who are very troublesome, coming along with a sack and threshing out a basket or two of paddy. The stubble is also usually burnt where it is long enough. Reaping.

A man in the season can reap about as much as he can plough—about 10 acres.

The threshing floor is a convenient high field with the grass hoed from it. The dried mud soil usually gives a clean enough surface, but occasionally it is clayed or plastered with dung. All the available cattle are used for treading out the grain.

A man who hires labour for ploughing and reaping will often do his threshing by the labour of his own family.

Beating out the grain with sticks was at one time occasionally practised near Thanatpin where the canal overflow floods the land at harvest.

Winnowing is done by dropping the paddy through a sieve from a height, or sometimes by fanning with trays.

In some parts Shans are hired at a little above the ordinary rates to winnow by throwing the paddy into the air with long shovels.

Paddy is usually sold on the threshing floor, the seller employing a man at eight annas a hundred baskets to measure it.

Gleaning. The poor of the village may glean as soon as the sheaves are tied up. On wet land the reaped plant sometimes sprouts again, but this is seldom reaped.

After harvest a small *natsin* of whittled bamboo is often erected in the fields.

After harvest. Winter ploughing is not resorted to. During the slack time small heaps of dry manure are sometimes put on the poorest fields. The Indian goes in for manuring, partly because he generally keeps more cattle. The Burman does little manuring except on the nursery, but makes up for it by more thorough ploughing. The slack months are used for cutting ploughs, harrows, firewood, etc. for the next year.

Fallows. Deliberate fallowing is rare. Most of the area returned as fallow is either land temporarily abandoned—*e.g.*, where a stream has broken in and covered the land with coarse sand, or land for which no tenant can be found, or land which owing to loss of cattle or lack of seedlings or labour could not be ploughed or planted up in time.

Other kinds of cultivation. *Taungya* cutting seems to have decreased since first settlement in favour of permanent cultivation.

No progress in the number or quality of miscellaneous crops is discernible through the successive settlement reports, and there are no peculiar methods worth mention.

Government farms. Land has been acquired at Nyaunglebin for an experimental farm, but it is not yet started.

Grazing grounds and cattle paths. The area reserved for grazing in 1899-1900 was 57,313 acres, and in 1915 is 70,915 acres although 10,308 acres of grazing reserve was recently acquired for the Pegu-Sittang Canal Reservoir, and 71 acres excluded for other reasons such as extension of villages. There has thus been a large increase in the last few years. At the original

settlement of the southern part of the district the subject of grazing reserves was considered a difficult problem, and Captain Parrot made proposals to declare all the uncultivated strips of land along streams as reserves, but the proposal was not adopted. About 1905-06 the district authorities notified certain *kwinns* as closed to further extensions, thus reserving such uncultivated strips as remained.

This list of *kwinns* has since been added to from time to time.

The cattle paths leading to reserved grazing grounds have been demarcated. In the Settlement report on Nyaunglebin recently completed the Local Government have approved a proposal that certain grazing grounds which have become choked with jungle or otherwise unserviceable should be thrown open for cultivation.

It has also been ordered that steps be taken to encourage cultivators to leave a portion of their holdings fallow for grazing their cattle on, a concession in rates of assessment being promised. They have been informed, and it remains to be seen whether the desired effect will be secured.

Grazing grounds are unpopular with the villagers, and with the substitution of stall fed bullocks for buffaloes the need for them is not so great as formerly.

In the Pegu subdivision the water supply for both men and beasts is from tanks, the majority of which dry up in the hot weather. This is a very serious matter. Water-supply.

In exceptional cases tanks reserved for drinking purposes by the people who realise the necessity of preventing cattle from polluting their supply are fenced in, and separate tanks are provided for cattle; but while there is a plentiful supply throughout the rains great hardship is experienced during the hot weather when most of the tanks run dry. Cattle have to be sent away to distant villages and even to the Sittang. Most of the small streams and the Pegu river are affected by tides and are useless for drinking purposes. In the Nyaunglebin subdivision the conditions are somewhat better.

There are several hill streams, besides wells and tanks. Until the new reservoir for Pegu is built water continues to be drawn from wells and tanks of doubtful purity. About a mile out on the Rangoon road is an excellent Artesian well, the property of the Aerated Water and Ice Manufacturing Co. Pyuntaza is the chief water-supply station for the Burma Railways, and some trouble is experienced in the hot weather to meet all demands.

Access to interior holdings. *Access to interior holdings.*—This was an important problem at one time, but has now largely been solved by the spread of the practice of living on the fields in huts during the rains.

CHAPTER V.

Forests and Minerals.

Area and position of forests. Of the 4,057 square miles in the district, about 1,424 are reserved forest, and about 250 unprotected forest. The forest is chiefly in the Yomas, but some areas are reserved for firewood, etc., in the eastern plain. Besides teak and other timber the chief products are bamboos, canes, wood-oil, *shaw-fibre*, charcoal and salu and other thatches. A kind of rubber is also yielded by the *parameria glandulifer*.

Admini- The district is divided between two forest divisions, the stration. Pegu, which administers the Pegu subdivision and also some reserves in the Hanthawaddy and Tharrawaddy districts, and the Nyaunglebin, formed in 1915 out of the Shwegyin Forest Division, with headquarters at Nyaunglebin.

Pegu Forest Division. The reserved forests of the Pegu Forest Division in this district have an area of 733 square miles. They may be broadly classified as:—(A) Timber producing reserves, and (B) Fuel and Fodder reserves.

A. Tim- They are situated entirely in the valley of the Pegu ber pro- river, in its upper part they occupy the whole width of ducing reserves. the valley, but within a few miles of Zaungtu the limits of cultivation are reached and the reserves continue in two branches of varying width along the East and West watersheds of the river. They thus form a continuous block of forest with an area of 565 square miles, or very much more if contiguous forests in adjacent districts are included.

For the most part the reserves contain hilly and broken country unsuitable for permanent cultivation. The most hilly part is in the West where the Yomas form the boundary between these reserves and those of Tharrawaddy and Rangoon Forest Divisions. The highest points in the Yomas are Sanwindaung, 2,258 feet at the northern extremity of the reserves, Kanbalutaung, 2,710 feet some 9 or 10 miles further South, and Ayodaung 1,561 feet at the source of the Mahuya *chaung* where the Yomas divide into several spurs. On this side the ground is very broken and the slopes very steep. East of the Pegu river the country is much less

hilly and rises gradually to the watershed. The highest point on this side is Wanettaung 947 feet. The slopes are steep in the North but become easy towards the South where flat alluvial areas occur near the large streams. A few small patches of permanent cultivation were in existence in these latter areas when the reserves were formed, and were excluded. Their area is about 27 acres. Permanent cultivation would of course be possible in these flat alluvial areas, and it is hoped to establish forest villages on them to supply labour which is much needed. The underlying rocks are sandstone and shales. The soil is usually a sandy loam, but in low places near the large streams it becomes heavier from the greater quantity of clay in its composition. In many parts where the shales are near the surface the soil consists largely of small fragments of hardened clay which is extremely liable to landslips in the wet season.

Originally the purpose was to reserve the teak bearing areas, and the following tracts were reserved for this reason :— Legal position.

Kadat Reserve—79 square miles, by Notification No. 50 (Forests) of 14th June 1877. As no settlement enquiry was made the Reserve was renotified after a full enquiry by Notification No. 200 (Forests) of 29th May 1902.

South Zamayi Reserve—227 square miles, by Notification No. 77 (Forests), dated 15th September 1881. To this was added a small extension of 2 square miles by Notification No. 61 (Forests), dated 14th June 1888, to take effect from 1st September 1888.

Letpan Reserve—18 square miles, by Notification No. 47 (Forests), dated 26th July 1883, as revised by Notification No. 63 (Forests), dated 8th October 1883.

Pyinma Reserve—15 square miles; proposed in 1885 but not declared a reserved forest till eight years later, by Notification No. 35 (Forests) of 28th January 1893. This Reserve contains little teak and has never yet been worked for it.

The following areas were reserved to preserve valuable timber other than teak and to protect the forests from being destroyed by fuel cutters, etc. :—

Pyinbongyi Reserve—14 square miles, by Notification No. 119 (Forests) of 7th April 1892.

Shwelaung-Kodugwè Reserve—61 square miles, by Notification No. 86 (Forests) of 28th February 1894.

Salu Reserve—36 square miles, by Notification No. 354 (Forests) of 14th October 1897.

Talaingma Reserve—18 square miles, by Notification No. 43 of 4th March 1907.

Shanywagyi Reserve—19 square miles, by Notification No. 45 of 4th March 1907.

Aungmya Reserve—19 square miles, by Notification No. 46 of 4th March 1907.

Kabin Reserve—17 square miles, by Notification No. 48 of 4th March 1907.

Aseiktaung Reserve—34 square miles, by Notification No. 49 of 4th March 1907.

Pyinbônggyi Extension—4 square miles, by Notification No. 8 of 27th January 1908.

For fuel and fodder reserves see under B.

Privileges
granted
in re-
serves.

In the reserves first taken up the most important claims were those for *taungya* cutting. Various Karen *tès* or bar-racks existed in the hilly parts of the Pegu valley the inhabitants of which were accustomed to live by cutting *taungyas*. In every case these claims were allowed and areas were marked out in which the Karens were permitted to continue *taungya* cutting provided that no teak tree above 1½ feet in girth should be injured or destroyed. These Karen exclusions are:—

In South Zamayi Reserve 16 square miles in two blocks;

In Shwelaung Kodugwè Reserve 21 square miles;

In Aungmya Reserve 1 square mile.

In the reserves formed later the claims made and allowed were for bamboos, canes, and thatch which as a rule could only be got in the reserves.

Com-
position
of
forests.

The forest growth varies considerably, but two main classes can be distinguished, which are described by Kurz in his *Flora of British Burma* as—

(A) Evergreen Forests, sub-group 3 Tropical Forests, and

(B) Deciduous Forests, sub-group 7 Mixed Forests.

Ever-
green
forests.

One chief characteristic of this type is the great variety of trees found in it. The loftiest trees are chiefly leaf-shedders and include the following species:—*sterculias* of several species, *tetrameles nudiflora*, *albizzias*, *drabanga sonneratioides*, etc., which are of little value except perhaps for making matches. More valuable kinds found are *pentica burmanica* (*thitka*) and the large wood-oil trees such as *dipterocarpus alatus* (*kanyinbyu*), *dipterocarpus loevis* and *turbinatus* (*kanyinni*); also *hopea odorata* (*thingan*) and *parashorea stellata* (*kaunghmu*). Of

these the wood-oil trees are usually most abundant and have been much worked. *Thitka* and *thingan* are valuable timbers but are comparatively scarce and cannot be worked on a large scale. The number of less lofty trees is large but with the exception of the *lagerstroemias* there are none in demand as timber producers. A tree occasionally found is *cedrela toona* (*thitkado*) which yields a valuable timber but is too scarce to be worked commercially. A few other species are:—several species of *figus*, *ta-di* (*bursera serrata*), *thitto* (*sandoricum indicum*), *ywegyi* (*adenanthera pavonina*), *tanyin* (*pithecolobium angulatum*), *thanthatkyi* (*amorea rohituka*), *yehmyôk* (*trewia nudiflora*), *kanabo* (*baccaurea sapida*), etc.

Another characteristic of this type of forest is the thick undergrowth of canes, palms and bamboos which often form impenetrable thickets in the valleys. Of canes the following species are found:—*yemata* (*calamus latifolius*), *kyeinga* (*calamus fasciculatus*), *kyeinni* (*calamus garuba*), *thaing kyein* (*calamus erectus*). Other characteristic plants are *dandôn* (*calamus arborescens*), *salu* (*licuala peltata*) *yingan* (*zalacca wallichiana*), and the creeping bamboo (*dinocloa maclellandii*). The canes are extracted in considerable quantities for rafting and other purposes, and *salu* is the chief roofing material in this part. Where the jungle is not too dark, ferns of various sorts and *sticomeia* and numerous other herbs are found, but hardly any grasses. On the higher ground the *kyathaung* bamboo (*bambusa polymorpha*) is found and associated with it is *pyinkado* (*xylia dolabiformis*). This is a transition between the evergreen and the mixed forests. Forest of the above description occurs in the deep valleys along the slopes of the Pegu Yomas, also in the eastern part of the Pyinma reserve, in parts of Aungmya and throughout the Talaingma and Aseiktaung reserves. East of the Pegu river it is found along the eastern watershed in the South Zamayi, Shwelaung, Kodugwè and Salu reserves. It also extends into the valleys of the Kabin-Shanywagyi and Pyinbôngyi reserves. The extensive evergreen forest South of the Kodugwè stream is one of the features of the district, but it produces little of value except *Thitsi* and *Pyinma*.

(Mixed Forest). This is subdivided into (A) Upper Mixed Forests which are restricted to the hilly and rocky tracts, and (B) Lower Mixed Forests found on alluvium and the lowlands. Deciduous forests.

Upper
mixed
forests.

These are the valuable timber producing forests and contain teak and *pyinkado* as the principal species. Other trees found are *taukkyan* (*terminalia tomentosa*) *lein* (*terminalia belerica*), *yôn* (*anogeissus acuminatus*), *pyinma* (*lagerstroemia flos reginae*), *lêza* (*lagerstroemia tomentosa*), *myaukcharaw* (*homalium tomentosum*), *chinyôk* (*garuga funnata*) with many other species. The *kyathaung* is the prevailing bamboo but *tinwa* (*cephalostachyum pergracile*) is also plentiful. On the drier aspects *myinwa* (*dendrocalamus strictus*) is found, but such places are of small extent. The *thaik* bamboo is also not uncommon.

The trees begin to lose their leaves in the middle of February and except in the moister ravines are completely bare by the end of March. A few such as *gyo* (*schleichera trynga*), *thitpagan* (*millettia brandisii*), *thinnwin* (*millettia leucantha*), etc., regain their foliage early in the hot weather but the majority not until the beginning of the rains. Forest of this type prevails in the South Zamayi, Kadat, Letpan, and Pyinma reserves, and in parts of the Aungmya and Kabin reserves.

Lower
mixed
forests.

The species found are much the same as in the type of forest last mentioned, but the growth is much inferior in height and the trees are not so well shaped. Other species commonly found are:—*taukska* (*vitex leukoxylon*), *dwabôk* (*kydia calycina*), *mahlwa* (*dolichandrone stipulata*), *petthan* (*heterophragma adenophylla*), *thitmagyi* (*albizzia odoratissima*), *sitpin* (*albizzia procera*), *tein* (*nancelea diversiflora*), *gnu* (*cassia fistula*), *hmanni* (*gardenia crythroclada*), *hmanbyu* (*randia uliginosa*), *kabaung* (*strychnos nux vomica*), and many others.

The growth of bamboos is more interrupted and *wapyugale* (*oxytenanthera albociliata*) is more frequent than in the upper mixed forests. This type of forest is found on the lowlands in the reserves and merges into the other types previously mentioned. The *in* tree (*dipterocarpus tuberculatus*) so common in many parts of Burma is only found in one patch, in the Pyinbôngyi reserve. In all the forests creepers, including the *gônyn* (*entada scandens*), are plentiful and do much damage.

Past and
present
systems of
manage-
ment.

Until 1905 no regular system was followed in any of the forests. Light girdlings of teak were made and the timber thus girdled as well as naturally dead and fallen teak was extracted by Government contractors. Besides teak the only forest produce extracted was bamboos and canes. For other timbers there was no great demand and what

there was could be met from the unclassed forests. Between 1856 and 1870, 6,736 teak trees were girdled in the forests South of the Kyauktaga gorge on both sides of the Pegu river. During the same period 11,619 logs were extracted. Since then up to 1905 the number of teak trees girdled and logs extracted by Government agency has been as follows:—

Reserve.	Trees girdled.	Logs extracted.	Cost of extraction.
			Rs.
South Zamayi ..	3,156	14,691	1,71,385
Kadat ...	5,826	19,616	2,63,708
Letpan ...	2,861	6,422	1,11,910
Total ...	10,843	40,729	5,57,003

The revenue derived was probably over Rs 20,00,000.

In 1905 a working plan was sanctioned for the South Zamayi reserve and Messrs. Foucar & Co. were granted a lease for 15 years to extract teak from this and the adjoining reserves. The working plan estimated the yield of the South Zamayi reserve at 1,350 first class trees per annum. The number of trees girdled and logs extracted from July 1st 1905 to June 30th 1912 was:—

Reserve.	Trees girdled.	Tons extracted.	Royalty.
South Zamayi ...	8,567	6,413	1,65,692

A small proportion of this came from the Katat and Letpan reserves. Timbers other than teak were not extracted until the last six years. A minimum girth limit was fixed and the trees to be felled were first selected and marked by a forest subordinate. Other products like bamboos, canes and salu have always been extracted under licenses.

A working plan has also been prepared for the following reserves but has not yet been sanctioned : Kadat, Letpan, Pyinma, Aungmya, Talaingma, Shwelaung, Kodugwè, and Kabin.

Works
of
improvement.

In 1861-2 blasting was done in the Kyauktaga gorge, 78,390 cubic feet of stone being removed with 93 pounds of powder. In 1883 to 1885 blasting was done in some feeders of the Pegu river at a cost of Rs. 921. The Kyauktaga gorge is in the Pegu river about 64 miles north of Pegu.

Teak *taungya* plantations were begun in 1882 and except for the two years 1898 and 1899 have been continued since. An area is selected in which it is desired to introduce teak and the Karens are allowed to clear and burn it as an ordinary *taungya*. They are either supplied with teak seed or collect some which they put in lines when sowing their paddy. After reaping their paddy the Karens have to clear the rows in which the seeds were sown and the young plants are then counted and the Karens paid for them. The plantations need well weeding for the first few years until the plants are established. Afterwards they require attention every second year at least to cut back bamboos and other growth. Creepers do much damage unless kept in check. At ten years of age the plantations should be ready for thinning. From that time they are cleared every fifth year and thinned every tenth year. The area of plantations made in this way is 3,257 acres and the cost of formation and tending, Rs. 66,291. The present condition of the older plantations is not satisfactory, either owing to unsuitable locality or to want of attention. It is usual to find a small patch where the growth is good while the remainder of the trees are poorly grown. In a plantation of 1890 thinned in 1913 the measurements of two of the largest trees removed were :—height 78 and 73 feet, girth 2 feet 8½ inches and 2 feet 10 inches while the girth of the largest trees left went up to 3 feet 1½ inches. In one plantation of 1889 trees of 4 feet and 4 feet 5 inches were measured. This is exceptionally good. A scheme for regulating the work in the plantations has been sanctioned.

Roads and paths have received little attention hitherto beyond annual clearing of existing tracks. Between 1907 and 1909 Rs. 8,526 was spent on making a cart road from Zaungtu to Dawè. The alignment was bad and the work was condemned as extensive bridging was necessary to complete it. In 1912 Rs. 2,000 was sanctioned for realign-

ing the main path through the South Zamayi reserve and the work is in progress.

The following rest-houses have been built by the Forest Department:—

Rest-house.	Built in	Original cost.
		Rs.
Wakadut	1908	900
Thitni	1905	700
Kyunbinsakan	1901	700
Zaungtu	1904	2,000
Dainghmu	1904	317
Dawè	1898	700
Nyaungdôn	1904	216
Kadôk	1897	700
Saluchaung	1905	146
Tamabin	1906	200
Tandawgyi	1901	350 (now used as Ranger's quarters).

The Forest Department also keeps in repair the hospital building at Zaungtu, where a hospital assistant is stationed from December to May on account of the Indian coolies imported yearly by the Forest Department.

Fire-protection has been carried out as follows :—

Reserve.	Year first protected.	Cost to date.	Remarks.
		Rs.	
South Zamayi ...	1883-84	46,455	60 square miles protected up to 1899-1900 since then, all.
Kadat ...	1889-90	8,419	
Letpan ...	1900-01	15,920	
Pyinma ...	1905-06	10,587	7 square miles not protected since 1910-11.
Shwelaung-Kodugwè.	1902-03	7,384	Not protected since 1910-11.
Salu ...	1903-04	3,022	Not protected since 1910-11.
Pyinbôngyi ...	1906-07	11,726	
Total ...	...	1,03,513	

The advantage of fire-protection to teak is still very doubtful, and experiments are in hand to try to determine the question. Natural reproduction of teak is certainly poor throughout, and the bamboo cover is so dense that what young plants do survive have little chance to develop into sound trees without artificial help, which is of course expensive and difficult to carry out over large areas.

The chief bamboo, the *kyathaung*, has not flowered since the occupation. The *thaik*, which is much more local, flowered in 1914-15. The important works of creeper cutting and improvement fellings have not received much attention until the last few years, during which Rs. 16,979 has been spent on them. Under the working plans more of this work is to be done in future.

The following reserves have been surveyed by the Imperial Survey Department on a scale of 4 inch to the mile:—South Zamayi, Kadat, Letpan, Pyinma, Shwelaung-Kodugwè, Salu and Pyinbôngyi. Their area is 452 square miles, and the survey cost Rs. 51,405.

B. Fuel
and
fodder
reserves.

These reserves comprising an area of 165 square miles are situated south-east of Pegu near the Sittang riv r. There are two reserves. The northern one, Kamasè, is a small area of about 10 square miles. The southern one, Yitkangyi, is now estimated to contain 155 square miles. When it was reserved in 1898 it bordered on the Sittang and was estimated to cover about 40 square miles, but when the Forest Survey party surveyed it, the area was found to be 158 square miles. The reservation proposals were based on old maps, and the Sittang has been moving eastwards since they were made and adding to the reserve. Since the survey was made in 1899 to 1901 accretions have continued and become part of the reserve the eastern boundary of which was notified as the Sittang. In 1912 a definite eastern boundary was fixed, giving an area of about 155 square miles.

The configuration of the country is gently undulating. The soil is alluvium from the Sittang.

Legal
position.

The reserves were gazetted by Notification 353 (Forests) of November 11th, 1898. A revising Notification, 425 (Forests) of October 28th, 1903, was issued to restrict grazing rights to a single area so that improvements could be undertaken elsewhere if desired. The eastern boundary was defined by Notification 164 of October 8th, 1912.

Privi-
leges.

All the villages near the reserves were allowed to cut *thetkè* for domestic use and to graze cattle in the reserves.

Grazing is now confined to about 90 square miles in Yitkangyi reserve.

The growth belongs to the type described by Kurz as Forest "tidal forests." The species found include :—*thamè* growth. (*avicennia tomentosa*), *thayaw* (*excœcaria agallocha*), *momaka* or *pulu* (*tamarix* sp.), *thinban* (*hibiscus tiliaceus*), and *kaya* (*acanthus ilicifolius*). In 1893 scrub-like forest of this kind was found in Kamasè reserve, but it has now disappeared. This is due to illicit cutting, fires, and more still to the changed conditions consequent on the moving of the river. The same thing is happening in the Yitkangyi reserve. In the east the growth is thickest and in the west are large and growing blanks.

No regular system of management has been introduced. No cutting of forest growth is allowed in the part closed to grazing. If the Sittang continues to recede so that the influx of the tides is less, the natural growth will continue to disappear. In the Kamasè reserve re-stocking is being tried on a small scale. The revenue from these reserves is got from *thetkè*, grazing and fisheries. At present the right to collect royalty on *thetkè* and grazing in the Yitkangyi reserve is auctioned, and in both reserves the fisheries are auctioned. In the Kamasè reserve the issuing of licenses for *thetkè* and grazing is done departmentally to give better control owing to the existence of plantations. The total revenue is very small.

Between 1901 and 1905 attempts were made first by Works of sowing various seeds and afterwards by putting out small Improve- plants to re-stock the Kamasè reserve. These measures were ment. unsuccessful. In 1906 another method was tried. This was to allow persons to cultivate plantains in the reserve* on condition that they planted trees between the plantains. Paddy cultivation has since been allowed in a small area on similar terms. At first cutch trees were planted and did fairly well, but they were not liked as the plantations did not thrive, and other sorts were tried. In 1912 there were the following trees :—

Ficus spp.	...	...	512
Kàkko	.	...	635
Cutch	...	...	515
Thabye	...	...	375
Others	...	...	86

The height varied from 2 feet to 20 feet.

An enquiry into the value of these reserves was made in 1915 and recommendations to throw them open have been made.

Rest-houses have been built at the following places :—

Rest-house.			Built in	Cost.
				Rs.
Yitkangale	...	...	1903	181
Badin <i>chaung</i>	...	...	1907	1,600
Pinkalaung	...	...	1907	460
Hnget <i>chaung</i>	...	...	1907	1,529

In 1901-02 one square mile in each reserve was fire-protected to ascertain if any tree would appear. The area was increased to 2 square miles in each in the following year. In 1912 protection was restricted to the areas planted up, and persons making the plantations had to do the protection. Small rewards were given for success.

Nyaung-
lebin
Forest
Division.

The Nyaunglebin Civil Subdivision was made a separate Forest Division on July 1st, 1915. Before, its forests were in charge of the Shwegvin Forest Division, and still earlier (1876), it was a subdivision of the Sittang Section.

Plains
reserves.

Before the railway was made in 1884 practically the whole of the subdivision was under forest, but since then cultivation has extended by leaps and bounds so that outside the hills forest areas are now confined to the plains reserves, as follows :—

Lower Kanyinmyaung reserve	...	45	} square miles.
Upper Kanyinmyaung reserve	...	13	
Pyuntaza fuel reserve	...	16	
Okpalin fuel reserve	...	300	acres.
Inpatlè fuel reserve	...	4	} square miles.
Tōnkan reserve	...	31	

Total ... 109 sq. miles

Excluding the Pyuntaza reserve these areas comprise the alluvial mixed deciduous type of forest in which teak is found, but bamboos are almost absent. The Pyuntaza area is subject to inundation for six months of the year. Its commonest species are *kyi* (*barringtonia acutangula*), *pyinma* (*largerstrœmia* sp.), *saze* and *kanyin* (*dipterocarpus* sp.). The future of these plains reserves will lie in their capacity to supply the surrounding villages with firewood. There is annually a great deal of theft of firewood from

them, and the time has perhaps come when regular management for the supply of fuel would pay Government.

Lower Kanyinmyaung reserve.—Revenue Department Notification No. 8 (Forests) of February 9th, 1886.

Upper Kanyinmyaung reserve.—Revenue Department Notification No. 7 (Forests) of February 9th, 1886. These two reserves lie at the foot of the hills west of Daik-u and Pyuntaza.

Pyuntaza fuel reserve.—Revenue Department Notification No. 556 of November 29th, 1904. A large fuel reserve east of the railway.

Ôkpalin and Inpatlè fuel reserves.—Revenue (Forests) Notifications Nos. 494 and 495 of December 18th, 1901.

Tônkan reserve.—Revenue Department Notification No. 6 (Forests) of February 9th, 1886. This reserve is astride the railway in the north of the subdivision. Large areas are covered with *kaing* grass or inferior jungle. It contains some *pyinkado* and a little teak. It has suffered from the changes in the courses of the streams through it. The formation of this reserve was opposed by the civil officers. Much of it is capable of becoming good paddy land. A few years ago some Shans were allowed to cultivate in certain of the *kaing* areas, in order to keep down elephants and fires. Considerable confusion arose regarding these settlers, and an enquiry was recently held, as a result of which it has been decided to cancel the reservation of parts of the reserve and to make other changes. The reserve is intended partly to conserve fuel and grazing.

Hill reserves.—These are of far greater importance and are the principal teak-bearing forests. They are of the "upper mixed deciduous" type, and are separated from the plain by a belt of evergreen forest 8 or 10 miles wide, in which the *wathabut* bamboo (*pseudostachyum halferi*) is characteristic. The reserves in the hills form one contiguous but very irregular block made up as follows:—

	Sq. miles.
Aingdôn-Kun reserves	274
Wunbein reserve	110
Nyabwa reserve	21
Yènwe and extension	50
Baingda	127
Total	582

Except the Yènwè extension, all these forests are now being managed for the production of teak under the Nyaunglebin Working Plan prepared in 1904-05. Their most valuable trees are teak and *pyinkado*, of which the latter is rather more plentiful. *Pyinma* and *leza* (*lagerstroemia* sp.) occur in good quantities, while *kanyin* and *thingan* are found in the evergreen tracts. The other trees most in evidence are different varieties of the terminalias, sterculias and ficus. The plan provides for the girdling of 3,800 teak trees, and a 15-years purchase contract for their extraction and removal is in the hands of Messrs. T. D. Findlay & Son. Bamboos are also in great demand from the foothills forest by villagers who cut them under licenses lodged with specially appointed bamboo license vendors.

Aingdôn-Kun reserve.—Revenue Department Notification 396 (Forests) of October 25th, 1894.

Wunbein reserve.—Revenue (Forests) Notification 233 of June 29th, 1893. Situated around the headwaters of the Yènwè and its principal feeder the Pein *chaung*.

Nyahwa reserve.—Revenue Department Notification 120 (Forests) of August 28th, 1889. Between the Wunbein and Baingda reserves.

Yènwè reserve.—Revenue Department Notification 121 (Forests) of August 28th, 1889. East of the Yènwè stream. Extended by Revenue Department Notification 303 (Forests) of July 26th, 1906.

Baingda reserve.—Revenue Department Notification 234 (Forests) of 29th June 1893. An extension of this reserve is proposed over an area of 15 square miles. It is the southernmost of the hill reserves and extends from the Yènwè on the north to the Kawliya stream on the south.

Un-
classified
forests.

South and south-west of the Nyaunglebin working circle are the principal unclassified forests of the subdivision. These areas are generally less rich in teak than the reserved forests but fine *pyinkado* trees are plentiful.

These forests together with certain of the plains reserves have been girdled over for teak during the past ten years. At first the coupes were exploited departmentally, but in 1912 the Bombay Burma Trading Corporation were given a purchase contract for the Baingda unclassified forests and in the following year the remainder of the coupes were leased to Messrs. Foucar & Co.

Extraction.

The bulk of the timber finds its way by water to Mòkpalin and thence by rail to Moulmein where Messrs. Findlay and Messrs. Foucar have their mills. The Bombay

Burma Trading Corporation extract their timber *via* the Pegu canal to Rangoon. The principal floating streams are the Kun, the Yènwè, the Baingda, the Kawliya, the Tònkan and the Aingdôn. All are good floating streams up to the paddy fields but thereafter with the exception of timber from the Kun *chaung* all logs are poled out to the Sittang. This is due to the impermanency of the channels and the backwater from the Sittang during the high water season. Timber from the Sinmakadin, a large tributary of the Kun, suffers considerable damage in falling over a 100-foot waterfall near its mouth. The transit of the fields sometimes causes friction with the cultivators. In some cases the timber is sent on by rail.

Fire-protection was first started in 1896. At different times the protection of the Upper and Lower Kanyinmyaung and the Tònkan reserves has been attempted with not very successful results, whilst in 1904 the whole of the hill forests were taken in hand, and again in part subsequently abandoned. In 1915 the forests under protection were as follows:—

Fire protection.

Reserve.	No. of acres attempted.	Acres successful	Cost.
			Rs.
Upper Kanyinmyaung	8,320	7,799	659
Yènwè	24,122	24,122	} 4,194
Wunbein	7,077	7,077	
Baingda	20,051	20,051	
Total	59,570	59,019	4,853

A further modification of the areas requiring protection is under consideration, but there are many difficulties, arising principally from the fact that the most remote forests are those requiring most protection.

Before 1912 road work was confined to existing tracks. During the past three years a graded bridle path 20 miles long has been completed from Daingtaya at the 7th mile on the Pènwègôn-Thanhayagôn District Fund road to Chaunggwa. A similar path from Chaunggwa down the Yènwè valley has been begun. These works are carried

Communications and buildings.

out under a quinquennial scheme ; its success depends on the importation of Indian coolies from Hazaribagh which is costly on account of the absence of food in the hills, and the necessity of carrying it from the railway.

No office has yet been built at Nyaunglebin. There are Assistant's quarters at Nyaunglebin and Range Officers have quarters at Pànwàgôn and Chaunggwa. There are forest rest-houses at Chaunggwa, Myochaung, Nyaungbinzin, Daingtaya, and Mobôn (under construction).

Estab-
lishment.

The Nyaunglebin Division comprises five ranges. There are 5 rangers, 5 deputy rangers, 20 foresters, 25 forest guards, 12 clerks and 6 peons.

Revenue.

The average revenue during the five years from 1909-10 to 1913-14 was :—

Budget Head.	By Government Agency.	By purchasers.	Total.
	Rs.	Rs.	Rs.
Timber ...	15,269	1,84,845	2,00,114
Firewood ...	64	332	396
Bamboos and canes ...	...	4,974	4,974
Other minor produce ...	33	...	33
Confiscated produce ...	...	5,876	5,876
Miscellaneous ...	...	7,559	7,559
Total ...	15,366	2,03,586	2,18,952

The average expenditure for the past five years is approximately as follows :—

Budget Head.	Total. Rs.
Timber	15,458
Confiscated produce	2,337
Live Stock, Stores, Tools and Plant	10,272
Communications and Buildings	7,450
Improvement and Extension of Forests	19,035
Miscellaneous	1,145
Establishment—Salaries	31,834
Travelling allowance	6,017
Contingencies	1,429
Total	94,977

At Pegu, Tawa, Pazunmyaung and elsewhere clay is extensively used for pottery, and also for bricks, for which there is a large demand to build pagodas. Laterite is quarried in decreasing quantities for road making. Sittang stone from outside the district is more used for this purpose. Minerals, clay and laterite.

Washing for gold was carried on until recently in the hill streams of Payagyi Circle as a kind of hereditary employment by a few families of Karens and Burmans. Since 1910 three applications for prospecting licenses in this area have been made, and one granted, but nothing was done and the only effect was to frighten off the local gold-washers. About ten years ago a European firm took out a license to prospect for gold in the bed of the Sittang, but apparently without result in this district. Gold.

Salt used to be worked in many parts of the plain, but there are now no salt licenses issued in the district. Salt.

CHAPTER VI.

Occupation and Trade.

In the hill forests the staple industry is timber and bamboo extraction. The Forest Department has found it necessary to import Indians to supplement local labour. Sawing is carried on along the Pegu river, the Sittang river, the canal at Nyaunglebin and elsewhere. Timber.

On the waterways a large number of boatmen, chiefly Chittagonians, are found. Boatmen.

Rice mills have sprung up in the last few years at many of the important railway villages, etc., employing chiefly Indian labour, though owned by Chinese, Burmans or Indians. There are mills at Pegu, Thanatpin, Kyauktaga, Abya, Waw, Kadôk, Paungdawthi, Daik-u, Nyaunglebin, Madauk, Onhnè, and perhaps others. In 1906 there were only two mills in the district. They grind most of the rice consumed locally, and also export largely. Some of them do the milling of parboiled rice for India and Ceylon. They charge Rs. 8 a hundred baskets for grinding paddy for local people, and also sell the bran. Manufac-
tures.

Breeding of silkworms by the Yabeins died out over 20 years ago.

Other industries are brick-making, especially in Pegu Town, and pottery. There is very little of the finer glazing done, but much rough glazing. Pegu jars are made in the district, but are not and never were made there to a large extent. Like Pegu hounds, Pegu ponies, the Pegu Club, etc., they are called not after the district, but after the Burmese province annexed in 1852. The chief centres of pottery are Pegu and Pazunmyaung.

Sugarcane pressing for jaggery is carried on locally on the Mylue grant.

Charcoal burning is carried on west of Pyinbôngyi for the Rangoon market.

The making of *salu* and *thetkè* thatching, of hand paddy mills, of ploughs, harrows, etc., is carried on as a subsidiary occupation to agriculture in suitable localities.

The important fishing industry, like agriculture, is dealt with elsewhere. On it depend the drying of fish and making of *ngapi*.

Silversmiths in Pegu town are justly noted for their skill.

Good bronze figures are also made there.

Trade :
Imports.

The imports, chiefly from Rangoon, are on the increase. They are clothing and stores generally. The chief means of distribution are Indian and Chinese traders and petty bazaar sellers, mainly Burmans.

Exports.

The usual congestion at the railway stations in the paddy exporting season takes place at the stations in the district. There is also congestion at Tawa lock on the canal. Along many of the waterways rice has to be held up in large granaries until the rains.

CHAPTER VII.

Means of Communication.

General.

The district is well served by good waterways and two railway lines. There are also some roads and paths.

South of Payagyi paddy is exported to Rangoon by water. Considerable congestion occurs at Tawa lock on the Pegu-Sittang canal during the busy season. From Payagyi northwards the resources of the railway are severely strained to deal with the mountains of paddy stacked at the stations in January and February. The Moulmein line

carries much paddy even from the station on the canal, Waw, since delay at the lock is avoided and paddy reaches Rangoon the same day.

The Sittang is navigable by boats of shallow draft throughout the year, but is extremely dangerous below Myitkyo owing to an enormous bore. It does not carry any considerable portion of the trade of the district. Steam launches ply on it carrying chiefly passengers, and it is much used for floating. Most of the downstream traffic goes through Myitkyo lock into the canal. The Pegu river is not navigable between December and May, but during the rains large cargo boats and launches can get up to Zaungtu. It is an important highway for the south of the district.

Water-ways.

Before the advent of the Toungoo railway the main route northwards from Rangoon was by water up the Pegu river as far as Tawa where the present canal entrance is, and from there into the Sittang river through the small Pyingyun creek for a length of 16 miles. Between 1862 and 1864 some three lakhs of rupees were spent in improving this narrow waterway which entered the Sittang near Kayazu, but the work was never satisfactory as during the dry season when the river was not in flood navigation was restricted to the few days of spring tides in each month. The high bore in the Sittang also added considerably to the dangers of navigation. It is reported that on one occasion a wing of a Madras regiment on its way to Toungoo was destroyed by being caught in a high bore. After some delay the Pegu-Sittang canal was made under the orders of Sir Ashly Eden. It was begun in 1873-74 and was opened to traffic in 1878. The new canal connected up the Pegu river at Tawa with the Sittang at Myitkyo, a distance of 37 miles. The length of the canal was determined by the necessity of entering the Sittang as high as possible to avoid the bore which was then stated to be 8 or 9 feet high at Kayasu. The canal runs through the Thanatpin lake, from which there is a branch canal to Pegu. The branch was much used till recently but is now choked by the *bedabin* weed. The main canal where not in cutting was made with one embankment only—on the east, to keep out river floods and to hold up drainage water coming in from the west. The two ends at Tawa and Myitkyo are closed by locks, while the surplus drainage water is passed out by four large escapes, at Abya, Minywa, below Thanatpin, and at Kyaikpadaing. There has been much

Pegu-Sittang canal.

trouble with some of these escapes, especially that at Minywa where the Sittang approaches close to the canal. For eight months in the year the water level in the canal is high above the water in either of the rivers; water has therefore to be carefully economised. The canal is very largely used for through traffic from upcountry to Rangoon. For the year 1913-14 the value of its traffic exclusive of a certain amount of local traffic which is picked up at the Waw railway sidings and carried out by rail was about :—

	Tons.	Value. Rs.
Paddy ..	154,985	64,76,969
Timber ...	59,912	39,68,170
Firewood ...	7,908	80,340
Fruit and vegetables ..	9,785	1,14,475
Ngapi and dried fish ..	1,448	46,200
Miscellaneous ...	35,331	5,48,355
Total ...	237,260	1,12,34,509

There is now an increasing passenger traffic since six launches ply up and down connecting with the Moulmein railway line at Waw and with a motor service to Pegu at Thanatpin. As Tawa is not above the tides, the canal water is brackish.

This canal is one of the chief navigable canals of Burma, and was the first made by the British. The constant stream of teak rafts towed or poled down it at the rate of less than three miles a day, the busy scenes at Tawa lock by night and day in the paddy season, the picture of villagers fishing or bathing from its populous banks, all go to make it the most interesting spectacle in an otherwise dreary plain.

The profit from the tolls at the locks is considerable. Up to 1903-04 these had aggregated 19·3 lakhs against a total outlay of 58·6 lakhs, of which 44 lakhs was capital expenditure.

Moyun-
gyi
reser-
voir.

This is a storage réservoir for the canal in a wide shallow depression in the country east of Pyinbongyi, the depth and area of which has been increased by artificial embankments, the west part of the Pagaing bund on the north, and the Moyungyi bund on the east. The water stored has been found insufficient, and dredging has failed to keep a deep enough perennial channel in the canal, so

the embankment is now being continued on the south side also. The spread of water will then be about 40 square miles when the tank is full. There are two escape sluices at Zwèbat and Sinchedaing, leading by large navigable channels into the canal. The reservoir is fed by streams from the Yomas on the west. Under the name of the Pyinbôngyi lake it is a well known duck ground.

Many of the tributaries of the Sittang are navigable in the rains, and are also used for floating timber. The tributaries of the Pegu river are small and run through sparsely inhabited country. They are used for floating. Some of the feeders of the Pegu-Sittang canal from the west are navigable for cargo boats, and save carting over the deep mud. In the flooded parts in the west of the district during the rains every depression becomes a navigable water-course, and in the absence of roads these are the main means of communication.

Other water-ways.

The main railway line to Mandalay runs through the middle of the district. It was opened as far as Pegu on the 27th February 1884 and as far as Pyuntaza on the 1st August 1884. In July 1885 it was opened to Toungoo. From Rangoon to Pyuntaza the line is now double; the embankment as far as Nyaunglebin has recently been widened to receive a double line. The line from Pegu to Martaban was opened for all kinds of traffic on the 25th September 1907, and serves the Pegu-Sittang canal area where there are several rice-mills. A projected line from Pegu to Syriam has been surveyed.

Railways.

The following 30 stations are in the district. One or two of them are passenger stations only, not open to paddy traffic:—

Miles from Rangoon.	Station.	Miles from Rangoon.	Station.
27	... Kawchê.	76	... Paungdawthi.
30	... Tôngyi.	81	... Dalk-u.
34	... Kyauktan.	88	... Pyuntaza.
38	... Tawa.	90	... Ngadatkyi.
43	... Payathônzu.	93	... Nyaunglebin.
47	... Pegu Junction.	98	... Tawwi.
52	... Shwehile.	101	... Peinzulôk.
57	... Payagyi.	109	... Kyauktaga.
59	... Payagale.	111	... Yindailkôn.
61	... Kyatkôn.	114	... Pônwègôn.
65	... Pyinbôngyi.	119	... Tawgywè-In.
71	... Kadôk.		

These are on the main line. On the Martaban branch are :—

Miles from Rangoon.	Station.	Miles from Rangoon.	Station.
(47)	... (Pegu)	60	... Kyaikhla.
50	... Kali	63	.. Waw.
53	... Shanywagyi.	70	... Abya.
56	... Naungpattaya.	76	... Nyaungkashé.

The Pegu river is crossed just north of Pegu by two large bridges, one on each line. In the Daik-u township the drainage channels are constantly changing and cause much trouble; there is a large bridge at Pyuntaza. A road bridge crosses the line in Pegu town; elsewhere there are level crossings. On the Martaban line there is unfortunately only a swing bridge over the canal at Waw, which blocks the canal when shut. The line leaves the district by a large bridge over the Sittang.

Roads.

The Nyaunglebin subdivision is badly off for roads, having only unconnected fragments of roads. The south-east of the district also needs more roads. Most of the roads of the district are only bridle paths, the berm of which is a dry weather cart-road. The bridges are built wide enough for carts.

The first road was the military highway from Rangoon to the frontier of Upper Burma, more or less parallel to the present railway, except that the railway describes a curve away from it eastwards in the Nyaunglebin subdivision. This road in the main follows the old Burmese royal road of King Tabinshweli who conquered Pegu from Toungoo in the sixteenth century. In the Pegu subdivision this is still the most important road. It is a Provincial road and enters the district near Intagaw and runs close to the railway through Pegu to Kadók. It is a metalled cart-road with good bridges, mostly masonry, and is open throughout the year. In the Nyaunglebin subdivision, where the road leaves the railway, it has been abandoned, but the track is still largely used in many parts, and sanction has been given to its being reopened. The road was abandoned owing to dacoities and unsettled conditions after the annexation of Upper Burma, and owing to the railway taking another route. It is of importance as being part of the main Rangoon-Mandalay road.

Other roads are—

Intagaw-Tôngyi road.—This branches off from the above at Intagaw, 14 miles south of Pegu, and runs south-east to Tôngyi railway station, and on to the Pegu river at

the ferry opposite Kawa. It is a District Cess Fund raised and metalled footpath open to carts in the dry months. From Tōngyi to the river it is a Provincial metalled cart-road open all the year.

Banbwegōn-Tawa road.—This Provincial road connects the Rangoon road, 9 miles south of Pegu, with Tawa railway station on the east and is continued to the Pegu river opposite Tawa lock. It is metalled, and is open the whole year.

Payagyi-Egayit-Waw-Payabyo road.—From Payagyi on the main road and railway, 10 miles north of Pegu, is a Provincial metalled cart-road to Egayit. From Egayit to Waw and on to Payabyo on the Sittang, it is continued as a District Cess Fund metalled footpath, with a cart bridge over the canal at Waw, the berms being open for carts in the dry weather.

Payagyi-Sitpinzeik road.—This is a District Cess Fund metalled footpath from Payagyi westwards to the Pegu river and Sitpinzeik on the Pegu-Tandawgyi road. The river has to be forded at Bawnatkyi.

Pegu-Tandawgyi road.—This Provincial metalled footpath runs from Pegu north-west along the right bank of the Pegu river for 17 miles. It is to be continued to Zaungtu, another 17 miles, shortly. It is bridged for carts.

Pegu-Thanatpin road.—This is a Provincial metalled cart-road connecting Pegu with the canal and Thanatpin township headquarters. It is very much used, there being several motor cars plying for hire between the two towns.

Thanatpin-Kamase-Ōnhnè-Tawa road.—The canal is bridged at Thanatpin, and this road takes a wide circular sweep and taps the country east of the Pegu river and the canal. It is a metalled footpath and dry weather road and has done something to remedy the want of communications in the south-east of the district. It is maintained from the District Cess Fund.

Tawa-Zinyaungbin-Pegu path.—An unmetalled road, leads from Tawa lock, where there is a bridge over the canal, to Zinyaungbin, and is continued as a footpath along the left bank of the Pegu river to Pegu.

The above are all in Pegu subdivision. The Pegu-Sittang canal is also bridged at Posein and Le-cinzu.

In Nyaunglebin subdivision are the following roads:—

Kadōk-Pyuntaza road.—In this is included its feeder road to Daik-u station. It is maintained from Provincial funds. It is a branch continuation of the main military

road first mentioned, the old line of which has been abandoned. This road runs near the railway, and is bridged and drained, but the $6\frac{1}{2}$ miles from Pa-aungwè to Pyuntaza is temporarily abandoned, owing to damage by the Kawliya and Yènwè streams. (See Chapter IX.) It is metalled through important villages only.

Pyuntaza-Nyaunglebin road.—The last road is continued to Nyaunglebin by a metalled cart-road maintained from District Cess Funds. A road is proposed along the railway from Nyaunglebin to Kyauktaga, which, with the roads next mentioned, would form an important loop with the old military road further west.

Kyauktaga-Ywathit road.—A short Provincial cart-road.

Ywathit-Yindaikkôn-Kyungyaung road.—This continues the above along the railway to Yindaikkôn station and thence turns westwards at right angles across the railway to Kyungyaung on the abandoned military road. Ywathit is at the end of the Sittang bund, which is used as a foot-path. It is a District Cess Fund bridle-path.

Nyaunglebin Pazunmyaung road.—A Provincial cart-road bridged, drained and metalled. This important road carries the traffic of the villages along the Sittang and of Shwegyin. Owing to the Sittang having taken a more westerly course and left Pazunmyaung dry, this road no longer affords a direct communication between river and railway. Its extension to Kwindala on the Sittang is under consideration.

Pènwègôn-Ananbaw road.—A Provincial metalled bridlepath in the north of the district from the railway to the Sittang. Its importance will be enhanced when the road on the other side of the Sittang from Nathangwin to Kyaukkyi is made into a cart-road; and it is proposed to widen and metal it for carts.

Pènwègôn-Thambayagôn road.—A District Cess Fund bridle-path from Pènwègôn westwards, crossing the abandoned military road two miles from Pènwègôn. This is a useful road both for the villages along it and the forest behind it. It is connected with a forest road to Chaunggwa.

Daik-u-Ôkshikkôn road.—An important connection, almost completed, between the railway at Daik-u and the old military road. Another such connection is proposed from Nyaunglebin to Wainggyi.

These are all the roads in the district. The base of the Pagaing bund from Myitkyo to Tazôn on the railway is used as a cart-road in the dry weather, and could be a most

useful road, but the track does not receive much consideration and numerous borrowpits, etc., have to be encountered. It is also used as a path.

The Sittang bund along that river to the north of Nyaunglebin, 44 miles long, is an important means of communication for the villages along it. The Pegu-Sittang canal bund and towpath is also used by pedestrians and cyclists.

Besides those mentioned the most important roads proposed are the reconstruction of the old military Toungoo road and the connecting up of the roads along the railway in Nyaunglebin subdivision so as to form a loop with it. Other important roads are proposed to serve the south-east of the district.

There is a ford in the dry weather over the Kun stream on the old military road, but no bridge except the railway bridge. The chief communication of Shwegyin with the rest of Burma is *via* Nyaunglebin, by the Pazunmyaung road and thence by water, or by boat across country in the height of the rains, or by cart across country and by ferry over the Sittang from Tagundaing in the dry weather. Communication with Tharrawaddy District on the west is scanty ; there are a few tracks over the Yomas.

External.

The chief junctions of communications are—

Nodal
points.

Pegu.—River, canal (not now navigable), two railways, roads north, south, east and north-west.

Tawa.—River, canal, railway, three roads, canal bridge, ferry.

Thanatpin.—Canal, branch canal (not now navigable), two roads, station on proposed Syriam railway.

Waw.—Canal, railway, bridge, roads west and south-east.

Myithyo.—Sittang river, canal, Pagaing bund.

Payagyi.—Railway, roads north, south, east and west.

Daik-u.—Railway, two roads.

Nyaunglebin.—Railway, two roads.

Ywathit.—Railway, Sittang bund and road.

CHAPTER VIII.

Famine.

Nil.

CHAPTER IX.

Administration, General and Judicial, Public Works, etc.

General
admini-
stration.

General administration is controlled by the Commissioner, Pegu Division, with headquarters at Rangoon. The following is a list of the Deputy Commissioners of the district :—

- 31st January 1883—William de Courcy Ireland, B.A., LL.D.
- 2nd December 1885—Lieutenant-Colonel George Augustus Strover, M.S.C.
- 17th April 1886—Alfred Macdonald Bulteel Irwin, I.C.S.
- 5th April 1890—Charles John Assheton Duke.
- 15th January 1891—Alfred Lacey Hough.
- 5th March 1891—Stewart Howard Thomas de La Courneuve.
- 21st August 1891—James Stuart Davidson Fraser.
- 9th November 1891—Major Frederic Duncan Raikes, C.I.E.
- 7th January 1892—J. S. D. Fraser.
- 1st October 1894—William Ninnis Porter.
- 15th August 1895—Ernest Ford, I.C.S.
- 26th August 1895—George Eustace Riou Grant Brown, I.C.S.
- 16th October 1895—Lieutenant-Colonel Gervase Selwyn Eyre, I.C.S.
- 19th November 1895—W. N. Porter.
- 4th March 1897—Knightley Grey Burne.
- 3rd April 1897—W. N. Porter.
- 24th February 1898—S. H. T. de La Courneuve.
- 27th November 1899—Theophilus John Metcalfe.
- 15th February 1900—S. H. T. de La Courneuve.
- 4th March 1901—Captain William Richard Stone, I.S.C.
- 18th March 1901—Neville Spencer Field.
- 6th November 1901—Henry Louis Stevenson, I.C.S.
- 14th November 1901—Walter Hardwick Christopher Minns, I.C.S.
- 20th August 1902—Captain Frederick Ralph Nethersole, I.A.
- 18th October 1902—George Francis Stephen Christie, I.C.S.
- 9th March 1905—Geoffrey William Dawson, I.C.S.
- 13th September 1905—Harry Lindsay Tilly.
- 2nd July 1906—Major Owen James Obbard, I.A.
- 6th September 1907—John Alfred Cope, I.C.S.
- 18th October 1907—Major O. J. Obbard, I.A.
- 25th February 1910—Major Thomas Lane Ormiston, I.A.
- 2nd October 1911—Captain Donald Niel Stuart, I.A.
- 17th November 1911—Major T. L. Ormiston, I.A.
- 2nd June 1913—Charles Caine Tulloch Chapman.
- 28th July 1915—William Stalkartt Morrison, I.C.S.

Thugyis.

The few surviving circle thugyis have now been pensioned. The number of village headmen is 416, of whom 65 have special civil and 56 special criminal powers. On the whole they are respectable men of substance and work well.

The district is under the Toungoo Divisional and Judicial Sessions Judge, whose headquarters are at Toungoo. Until recently it was under the Hanthawaddy Divisional and Sessions Judge. The Deputy Commissioner is District Magistrate, and his Headquarters Assistant is a Special Powers Magistrate. There is a District Judge for Pegu and Toungoo Districts, with headquarters at Toungoo, who is also Senior Magistrate. Each subdivision and township has its own Subdivisional or Township Judge; the Township Judges at Pegu, Nyaunglebin and Daik-u have Small Cause powers in the urban area. There are several Additional and Honorary Magistrates.

A large proportion of the numerous civil cases are concerned with land. A large number of pleaders and several barristers find employment, and Rangoon barristers are also engaged.

In 1874, before the district was formed, Lieutenant-Colonel Hamilton, the Inspector-General of Police, was killed in the Myinzaya Circle while operating against dacoits. The District Superintendent of Police was wounded at the same time and had to have his arm amputated. The following graphic account of the tragedy is given in a local police report:—

Crime
and criminal
justice.

"I beg respectfully to submit the following account of the fight ensued at Tipagaik and Ngetkyichaung jungle between police, villagers and dacoits:

(1) In Burmese Era 1235 there was a band of dacoits headed by notorious Bo Nga Kauk and his lieutenant Nga Lauk. They are sons of Maung Myat Hpu and Ma Yeik Pu of Payagale Taroktan village. Their confederates are as follows, *viz.*, Nga Laik Pya, Nga Waing, On Gaing, Hpo San, Pan Laung, Nga Saung and Nga Nyo. These outlaws made constant attack in vicinity of Payagale and refuge themselves at Tipagaik jungle and they were helped by Karen Maung Sa Li, Maung Hpaw and Maung Me of Tamangyi village. One day dacoit Nga Pan Laung was arrested by the Police Inspector Maung Tha Dun and was kept in the custody of Yazutgaung Maung Mo of Payagale Nesaungbyaing village. No sooner Burmese Era 1236 Tabaung Lazan the dacoit Bo Nga Kauk and his lieutenant Nga Lauk came and rescued the prisoner from the custody by force after killing the sentry constable Maung Meik and the dacoit also taken away two tumi guns. Some days after the above incidence on receipt of information, District

(2) In Burmese Era 1236. General Hamilton, Inspector-General of Police, with the following officers, *viz.*, Mr. Grant, Subdivisional Officer, Inspector of Police Maung Mo of Pegu, Inspector of Police Maung Bo Gyi of Shwegyin, Sergeant Maung Tet Khaung and Maung Kin came up to Payagale again to arrest the notorious dacoits Nga Kauk and his accomplices.

I am told that one of Nga Kauk's confederates said to have outraged a Karen girl while grazing buffaloes at Kwin-Ya-She field, the girl outraged by dacoits is said to be daughter of Karen Maung Hpaw, and for such a vice manner all Karens much annoyed upon these dacoits. Therefore Karen Maung Me of Ta-Man-Gyi village went and gave information to Inspector Maung Bo Gyi at Payagale the exact place where the dacoit 'Bo' Nga Kauk and his fellow-dacoits lived. Whereupon the Inspector of Police at once informed the Inspector-General of Police (General Hamilton).

ကံယင်ကောပ်မူကြံပါ သူရား။ သေနတ်မှန်ကုန်ပါပြီ။

General Hamilton when he heard such noise, he at once rushed into the hut, pity the volleys at wings then still pelting towards the hut. Momentarily Mr. Grant and the wing party closed to the hut and they found General Hamilton's body lay dead in front of the hut with a bullet wound.

'Bo' Nga Kauk was killed while on attack and his lieutenant Nga Lauk was arrested upon the hut, but he was killed too, and severed the heads of both brothers by Sergeant Maung Tet Khaung there and then and the other dacoits decamped.

It appeared that General Hamilton's body together with two dacoits' head were taken into Pegu on the 8th Nayon Lazan of Burmese Era 1236 (English year 1874 June).

Dacoit On Gaing and Nga Waing were arrested by Pyu Police and Pan Laung surrendered to villagers, Maung Ok and Nga Laik Pya surrendered before the Extra Assistant Commissioner U Maung Galay at Pegu."

After the district was formed it was until 1913 fairly free from crime in comparison with the neighbouring districts of Hanthawaddy and Tharrawaddy. This is attributed to the scarcity of toddy trees in the district. There was a large increase of crime of all classes in 1894, when there were 39 dacoities, but the succeeding years were quiet. In one of the dacoities in 1894 on the Pegu-Sittang canal Mr. Tucker, the District Superintendent of Police, was killed at Waw. This gang, 11 in number, were all subsequently hanged. The year 1897 was unusually quiet. Cognizable crime of all classes remains steadily at about 2,000 cases a year. Cattle theft has always been prevalent, and a great deal of it takes place from the large grazing grounds around Onhuè. The herdsmen themselves are the offenders in many cases. The traffic between Pegu and Thatôn in stolen cattle is considerable, and arrangements have been made for closer co-operation between the officials of the two districts, and for an increase in the number of ferries and stricter control over them. Holding cattle to ransom is also very prevalent, but holding human beings to ransom, which is rife in Hanthawaddy, Tharrawaddy and Prome, is fortunately rare in this district. Hurt and assault cases are numerous and increasing, probably owing to the growing taste for liquor among Burmans, and the prevalence of murder may be ascribed to the same cause. Dacoities with firearms are now increasing. The dacoits usually come from Upper Burma, notably Meiktila and

Yamèthin, or from Tharrawaddy. Organised serious crime latterly has confined itself to the vicinity of the railway line and is usually carried out by outsiders. Gambling is rife throughout the district. There is little opium smuggling, but the cocaine habit is growing. Rebellion and sedition have not been known since 1885 when the whole of Lower Burma was in a disturbed state.

The years 1913 and 1914 show a large increase in violent crime as the following table shows. The increase is more remarkable since the district area has decreased from 1911:—

List of true cases for 22 years.

Years.	All kinds of true cognizable cases.	All classes of violent crimes.	Dacoity.	Cattle thefts.	Remarks.
1	2	3	4	5	6
1893	1,546	66	21	228	
1894	2,389	129	39	340	
1895	2,093	37	6	301	
1896	2,078	38	6	314	
1897	1,319	17	...	103	
1898	1,862	30	10	181	
1899	1,672	29	1	159	
1900	1,674	35	2	102	
1901	1,456	40	...	118	
1902	1,557	31	3	129	
1903	1,450	44	3	100	
1904	1,657	42	1	135	
1905	2,702	63	3	252	
1906	2,765	64	6	282	
1907	2,208	71	3	230	
1908	2,201	57	...	242	
1909	1,691	43	2	206	
1910	1,887	56	9	166	
1911	1,931	46	7	176	
1912	2,051	53	5	184	
1913	1,883	91	10	188	
1914	2,039	114	9	193	

1

The table on page 4 of Volume B is obsolete. The of the Civil Police:—

Distribution and Strength,

Distribution.	Inspectors.	Sub-Inspectors.	European Sergeants.	Head Constables.	Constables.
I	2	3	4	5	6
DISTRICT					
Circle and Town Inspectors ...	8	..	..	..	..
Prosecutors ...	1	8	..	..	..
Depôt Staff	1	..	2	..
Readers	3	..	..	..
Escorts	2	18
Guards (if any)
Buglers	2
Orderlies	19
Menials
Main Lock-up	1	..	1	..
Reserve	3	..	..	..
(1) Total District Staff and Headquarters Lines.	9	16	..	5	39
STATIONS AND OUTPOSTS					
Pegu Town P.S.	5	..	9	84
Pegu West P.S.	2	..	3	15
Thanatpin P.S.	3	..	4	13
Minywa O.P.	1	5
Yitkangyi O.P.	1	6
Waw P.S.	2	..	3	13
Myitkyo P.S.	2	..	3	16
Payagale P.S.	2	..	3	16
Tandawgyi P.S.	2	..	3	14
Zaungtu O.P.	1	5
Kawa P. S.	3	..	4	20
Nyaungbin O.P.	1	5
Tawa P.S.	2	..	3	16
Kyauktan O.P.	1	5
Balauk P.S.	1	..	2	13
Onhne P.S.	2	..	3	11
Kamun O.P.	1	1	5
Nyaunglebin P.S.	3	..	5	18
Kwindala O.P.	1	5
Carried over

101

Pegu District.

Total of all ranks excluding Inspectors.	Mounted men (included in column 6).	Menials.		Number of firearms.		Number of Indians.		Military Police sanctioned for district.
		Peons.	Watermen.	Sanctioned.	Proposed.	Sanctioned.	Proposed.	
7	8	9		10		11		12

8	100	100	100	100	100	100	100	100
3	100	100	100	100	100	100	100	100
3	100	100	100	100	100	100	100	100
20	100	100	100	100	100	100	100	100
2	100	100	100	100	100	100	100	100
19	100	100	100	100	100	100	100	100
2	100	100	100	100	100	100	100	100
3	100	100	100	100	100	100	100	100
60	100	100	100	100	100	100	100	100

INCHES	1	2	3	4	5	6	7	8	9
10	100	200	300	400	500	600	700	800	900
20	100	200	300	400	500	600	700	800	900
30	100	200	300	400	500	600	700	800	900
40	100	200	300	400	500	600	700	800	900
50	100	200	300	400	500	600	700	800	900
60	100	200	300	400	500	600	700	800	900
70	100	200	300	400	500	600	700	800	900
80	100	200	300	400	500	600	700	800	900
90	100	200	300	400	500	600	700	800	900
100	100	200	300	400	500	600	700	800	900
110	100	200	300	400	500	600	700	800	900
120	100	200	300	400	500	600	700	800	900
130	100	200	300	400	500	600	700	800	900
140	100	200	300	400	500	600	700	800	900
150	100	200	300	400	500	600	700	800	900
160	100	200	300	400	500	600	700	800	900
170	100	200	300	400	500	600	700	800	900
180	100	200	300	400	500	600	700	800	900
190	100	200	300	400	500	600	700	800	900
200	100	200	300	400	500	600	700	800	900

Distribution and Strength.

Distribution.	Inspectors.	Sub-Inspectors.	European Sergeants.	Head Constables.	Constables.
I	2	3	4	5	6
STATIONS AND OUTPOSTS					
Brought forward
Peinzañk P.S.	2	...	3	16
Pènwègôn P.S.	2	...	3	16
Pyunlaza P.S.	2	...	3	17
Daik-u P.S.	2	...	3	17
Paungdawthi P.S.	3	...	4	18
Wainggyi P.S.	2	...	3	14
Intagaw P.S.	1	...	2	11
Punitive Police-stations	43	...	73	394
Kaddòk P.S.	2	...	3	11
Sapachôn P.S.	2	...	3	11
Pyinbêngale P.S.	2	...	3	11
Tumaung P.S.	2	...	3	11
Kalagyaung P.S.	2	...	3	10
Pyinbêngyi P.S.	2	...	3	11
Thandin P.S.	2	...	3	10
Thabyu P.S.	2	...	3	11
Paingkyân P.S.	2	...	3	11
Tamatake P.S.	2	...	3	11
Kyauktaga P.S.	2	...	3	11
(ii) Total at posts	65	...	106	513
(iii) Total for duty [totals of (i) and (ii)].	9	81	...	111	552
Trained men in Depôt	22
Recruits	40
(iv) Total for Depôt	62
(v) Reserve for sick and on leave.	33
GRAND TOTAL ...	9	81	...	111	647

Pegu District—concl'd.

Total of all ranks excluding Inspectors.	Mounted men (included in column 6).	Menials.		Number of firearms.		Number of Indians.		Military Police sanctioned for district.
		Peons.	Watermen.	Sanctioned.	Proposed.	Sanctioned.	Proposed.	
7	8	9		10		11		12

(INCLUDING THOSE AT HEADQUARTERS OF DISTRICT)—concl'd.

21	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	16
25	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...
510	...	...	...	...	...	...	...	114
16	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...
684	...	...	...	...	...	...	...	...
744	...	2	2	...	...	5	...	227

DEPOT.

22	...	...	...	...	...	...	...	...
40	...	...	...	...	...	...	...	...
62	...	...	...	...	...	...	...	...
33	...	...	...	...	...	...	...	...
839	...	2	2	...	...	5	...	227

Pegu District.

*List of Police-stations and Outposts in the
Pegu District.*

Sub-division.	Township or Circle.	Police-station or Outpost.	Remarks.
1	2	3	4
Pegu ...	Pegu ...	<i>Pegu Town</i> * P.S. <i>Pegu West</i> P.S. <i>Myitkyo</i> * P.S. <i>Payagale</i> P.S. <i>Tandawgyi</i> P.S. <i>Zaungtu</i> O.P.	
Pegu ...	Thanatpin ...	<i>Thanatpin</i> * P.S. <i>Minywa</i> O.P. <i>Yitkangyi</i> O.P. <i>Waw</i> * P.S. <i>Balauk</i> P.S.	
Pegu ...	Kawa ...	<i>Kawa</i> * P.S. <i>Nyaungbin</i> O.P. <i>Tawa</i> * P.S. <i>Kyauktan</i> O.P. <i>Intagaw</i> P.S. <i>Ohnhè</i> P.S. <i>Kamun</i> O.P.	
Nyaunglebin ...	Nyaunglebin ...	<i>Nyaunglebin</i> * P.S. <i>Kwindala</i> O.P. <i>Peinzañk</i> P.S. <i>Panwègèn</i> P.S.	
Nyaunglebin ...	Daik-u ...	<i>Daik-u</i> * P.S. <i>Pyuntaza</i> P.S. <i>Paungdawthi</i> P.S. <i>Wainggyi</i> P.S.	

1. The Police-stations in italics are headquarters of townships.

2. Stars against Police-stations indicate Posts where Military Police are stationed.

List of Additional Police-stations, Pegu District.

Subdivision.	Township or Circle.	Police-stations.	Remarks.
Pegu ...	Pegu ...	Pyinbôngyi. Tamatake.	
	Thanatpin ..	Thandin. Kalagyaung.	
	Kawa ...	Thabyu. Paingkyôn.	
Nyaunglebin ...	Nyaunglebin ...	Kyauktaga, Tumaung.	
	Daik-u ...	Sapachôn, Kadôk, Pyinbônggale.	

The sanctioned strength of gazetted police officers is one District Superintendent, one Assistant Superintendent at headquarters, and two Assistant or Deputy Superintendents for the charge of the Nyaunglebin and the recently formed Pegu police subdivisions. The strength of the police was greatly increased on reorganization in 1907. Owing to the increase in crime in 1913-14 punitive police were sanctioned for five years from 1st April 1915. This coming at the same time as revenue resettlement and the European war is a considerable burden.

Two hundred and twenty-seven Military Police of the Rangoon Battalion are sanctioned for the district, distributed as follows:—

Military
Police.

Name of Police-station.	Distribution of Military Police.
1. Pegu headquarters	113
2. Thanatpin	16
3. Waw	12
4. Myitkyo	12
5. Tawa	12
6. Kawa	16
7. Nyaunglebin	30
8. Daik-u	16
Total	227

The excise revenue is among the highest in Burma. The administration is under an Excise Superintendent.

Excise.

The liquor most commonly drunk is *kazawye*. Toddy is almost unknown in the district. The number of liquor shops is very large, and the prevalence of crime is ascribed to drink. The popularity of beer is growing. Opium smoking is widely spread, but the habit seems to be decreasing. A large preponderance of the consumers are Chinese. Illicit opium is imported from India *viâ* Rangoon, and on a smaller scale from the Shan States *viâ* Upper Burma. The cocaine habit has been rapidly spreading since its introduction about eight years ago. The morphia habit is mainly confined to the large towns along the railway. *Ganja* has probably been grown in small quantities in the Yomas since early times, and small supplies find their way *viâ* Kyauktaga to Rangoon.

Veterinary.

Cattle disease is not so severe as in many parts of Burma. There are four Veterinary Assistants. The Inspector in charge of the district has his headquarters at Insein.

Registration.

The Deputy Commissioner is Registrar, and the Treasury Officer Joint Registrar. At each of the other township headquarters the Township Officer is Sub-Registrar, and the Township Judge Joint Sub-Registrar, except in Nyaunglebin where the Subdivisional Officer is Joint Sub-Registrar.

Post and telegraphs.

The district is well off for postal facilities. It is the headquarters of the Pegu postal division. It is divided between the Maymyo and Rangoon telegraph circles.

Gaol.

There is a subsidiary gaol, which until 1914 had only the status of a lock-up.

Church.

The Additional Clergy Society Chaplain receives a Government allowance to officiate at the Pegu Church.

Military.

Pegu is the headquarters of a Company of the Burma Railway Volunteers, who have a rifle range acquired in 1885.

Public Works.

The Pegu subdivision is under the Executive Engineer, Pegu, whose division also extends beyond it, including Thatôn district. The Nyaunglebin subdivision was in the Shwegyin Public Works division up to 1886, then part of the Pegu division to 1888, then part of the Toungoo division till 1896, then of Pegu again till 1904, and since then has been under the Executive Engineer, Toungoo.

Canals and roads have been dealt with under Communications, and buildings require no comment. It remains to treat of embankments and drainage schemes. The problem of the district is to deal with the floods of the Sittang and its western tributaries. For this purpose two large embankments have been made, one along the Sittang in the

Nyaunglebin subdivision, the Sittang bund, and the other across the plain, the Pagaing bund and its connected embankment the Moyungyi bund.

A full account of this bund is given in a pamphlet, written in 1910, by Mr. Wells, the Executive Engineer at Toungoo, from which the following information is extracted. The object of the bund was to enable roads to be built across the flooded country between the Sittang and the railway; the opening up of the land to cultivation was a secondary consideration. The Nyaunglebin-Pazunmyaung road is the only such road which has ever been built, and it was in hand before the bund was made. Over 30,000 acres of land has however been protected for cultivation, and the bund itself is useful as a path for the villages along it. Now that cultivation has been well extended in the protected area, the work is probably beginning to show a profit.

Sittang
bund.

The embankment was sanctioned under two estimates, the Aingdôn embankment from the railway to the Sittang and the Sittang embankment continuing it to the mouth of the Pyuntaza *chaung*. It was not carried further than the mouth of the Athwè *chaung*, some six miles above the mouth of the Pyuntaza *chaung*. The last two miles or so were washed away about 1896. The length now is forty-four miles. There have been high floods in 1888 and 1909, but the bund has just escaped disaster. Changes in the course of the river have necessitated several retirements, and leakages, etc., have had to be dealt with. Spurs have also been made in places to keep off the stream.

It has been seen that before the Mandalay Railway was built the land between the Yomas and the Sittang in Nyaunglebin subdivision was entirely undeveloped. Mr. Decrettes, Executive Engineer, referred to it in 1873 and 1875 as a sea of *kaing* grass forest and swamp in which not more than 20,000 to 30,000 acres of cultivation had been cleared. West of the railway this country is now a vast paddy plain from north to south. East of the line, the north of the subdivision has been reclaimed by the Sittang bund. The part, south of Nyaunglebin, is still annually flooded from the middle of July to the middle of October. The streams draining out of the Yomas on the west through this area are the Yènwè, Kawliya, Kadòk, Baingda and Ma-udan. During the months of heaviest rainfall these streams flow into the flooded area of the Sittang and their channels silt up. This deterioration constantly moves up stream and more and more water overflows the bank of

Pyun-
taza-
Daik-u
plain
drainage.

each stream until it moves its course elsewhere. The result is that all these streams are in an unstable condition and do much damage to cultivated lands when in spate. The difficulty is intensified by the railway embankment which intercepts these cross country floods. Owing to the silted condition of the channels east of the railway the volume of water brought down will not pass the bridges until considerable heading up occurs, and the streams are always likely to break through the railway at new places. One partial remedy tried was the Yayundi canal. This is a canal $1\frac{3}{4}$ miles long with marginal banks in continuation of the old Tawa canal. Its object was to help the Yènwè or Pyuntaza *chaung* east of the railway to move into its original channel below Tawa and to reclaim flooded land. It has not been very successful. The canal and its banks form useful communications. An enquiry into the whole subject has just been finished by Mr. Rushton, and proposals for continuing the Sittang embankment to near the Pagaing bund at Myitkyo and for training the streams are under consideration.

**Pagaing
bund.**

When the Pegu-Sittang canal was being made it was found necessary to protect it from the enormous spill from the Sittang which still sweeps inland round the end of the Sittang bund and joining with the drainage from the west as mentioned above moves slowly south in one large sea of water. The Pagaing bund was accordingly made from near the railway line north of Pyinbôngyi for 18 miles across the spill way to the head of the canal at Myitkyo. From Moyungyi to Pagaing the spill water heads up to a maximum depth north of the bank of 10 to 12 feet above the level of the surrounding country, and is guided back into the Sittang above Myitkyo mainly through the Linga *chaung*. This and the Moyungyi bund also protect land for cultivation on the west side of the canal. The bund was badly breached in 1909, and much damage done to fields.

CHAPTER X.

Revenue Administration.

**Settle-
ments.**

In 1882, about the time of the constitution of the district, the first regular settlement was made by Captain

Parrott: The area dealt with included parts of the present Hanthawaddy and Insein districts, and the greater part of the occupied area of the present Pegu subdivision; the area was brought under supplementary survey at the same time. The rates imposed on rice land per acre varied from Rs. 2.75 to Rs. 0.25, and gave an increase in revenue of under 10 per cent.

The first revision settlement was effected in 1898-99 and 1899-1900 by Mr. Lowry. Outlying portions and extensions were at the same time brought under first settlement. The rates imposed varied from Rs. 4 to Re. 1. The increase of assessment was 29 per cent. and 24 per cent. in the two years respectively.

The Nyaunglebin subdivision, except Bawni Circle, was first settled in 1897-98 by Captain DesVœux, and the Bawni Circle in 1900-01 by Mr. Wallace. Rates imposed varied from Rs. 3.5 to Re. 1, and gave a very large increase of nearly 75 per cent. in assessment.

The whole cultivated portion of the district except a strip between the Yitkangyi reserve and the Sittang, still unsettled, came under revision settlement in 1911-15 by Mr. Grant and Mr. Page. Newly cultivated portions, etc., previously not settled were included, particularly the newly formed Thanatpin sandbank area. New rates were imposed in Nyaunglebin subdivision from 1914-15 which, when intermediate rates have expired, will give a further large increase of 49.44 per cent. over the previous demand. The rates vary from Rs. 5.25 to Re. 1. The new rates in the greater part of the Pegu subdivision have not yet been notified. Possibly when the Alok cut-off is transferred from Thatôn district and comes under revision settlement, it and the unsettled strip still remaining will be brought into line with the rest of the district.

The district was a favourite one for applications under the Waste Land Grants Rules of 1863 and 1865. Many grants were made under the two sets of rules, and the administration of the district is still suffering from the liberality with which they were granted and the carelessness with which they were supervised. By these grants large areas are now revenue free for ever or assessed at rates much below those on surrounding land. Nor does it appear that the grants were successful in hastening the development of the land, as they were not developed any more rapidly than other land. The liability of grants to pay cess has been a question of importance in the district.

Grants,
pottas,
etc.

Besides grants under these rules, there is another huge area leased by the Chief Commissioner Sir Charles Crosthwaite on special terms to Mr. James Mylne on condition that he imported Indians from Bihar and other poor tracts in India to work it.

The tenants on grants are generally much in the position of landholders who pay their revenue to the grantee instead of to Government.

Karen reserves.

The factitious importance attached to Karens in the early days of British Burma, probably owing to missionary societies, is testified by certain Karen reserves, or areas set apart in which only Karens can occupy land. The areas were made over in the form of *quasi*-grants to representative Karens, such as headmen. These reserves have prospered. Questions have arisen in them regarding the alienation of land in them to non-Karens.

Pottas.

During the days of the rapid extension of cultivation in the district, the system of pottas or grants of waste land to cultivators was much used, and a prejudice is discernible among revenue officers against the mere squatter. Unfortunately the system was abused and large areas got into the hands of a few men, often under fictitious names, while other pottas liable to floods and the like have been abandoned. Since 1904 the system which was associated with the *taikthugyi* system, has been given up in favour of the more natural policy of allowing cultivators to extend their holdings or take up waste land on payment of the revenue and in time acquire landholders' rights. Pottas are now issued only in exceptional cases.

Other grants.

Grants for religious and public purposes are small and have no special features. Grants of *thugyisa* are made if desirable when land becomes available by resumption under revenue process or otherwise.

Land revenue.

Being a Lower Burma district nearly fully cultivated with paddy, Pegu is an important Revenue district. Collection is not difficult, and outstandings and processes are not numerous. A considerable proportion of the fallow from year to year is assessed at intermediate rates. The revenue is collected on commission by headmen in the ordinary way. Notes are in general use and the amount of silver in circulation is small.

Fisheries.

Before the Government undertook the organization of the Pegu fisheries fish of all sorts were very plentiful. In the Sittang three hours' angling would result in the catch of a boatload of *kathabaung*, *kakadit* and other big fish. 'In

the smaller creeks enough small fish could be trapped in two days to provide a household with *ngapi* for a year. People who fished with *myinwuns* took only the *ngayans* and *ngabats* and let the other fish go. In the early days of Government control the fishermen made large profits, and their descendants still own large areas of land. About 1900 there were 75 leased fisheries, and fish were still very plentiful. In 1906 a fishery Myoôk was deputed to subdivide the existing fisheries, and from then on great activity was displayed in increasing the fishery revenue, and the abundance of fish fell off. In 1909 there were 160 leased fisheries, yielding a revenue of Rs. 1,90,535. In 1909-10 an *Inkunwun* was appointed to subdivide further and to open new fisheries, and the revenue for that year was Rs. 2,46,358 and increased as follows:—

	Rs.
1910-11, 310 fisheries	... 2,71,258
1911-12, 378 fisheries	... 2,79,153
1912-13, 388 fisheries	... 2,33,425
1913-14, 404 fisheries	.. 2,42,480

Of these 404 fisheries, 370 are District, 14 Public Works Department, and the rest Forest. All are under the same conditions of supervision, etc., and the revenue is collected by the district fishery staff.

List of Fisheries by Townships.

Township.	District Fisheries.	Forest Fisheries.	Public Works Department Fisheries.
1	2	3	4
Kawa	50	6	...
Thanatpin	28	2	4
Pegu	133	...	10
Dak-u	117	4	...
Nyaunglebin	48	2	...

The fisheries of Kawa and Thanatpin are wet weather fisheries and are worked in *Tawthalin*, *Thadingyut* and *Tazaungmôn* by means of *yin* and *myinwuns*. By *Pyatho* and *Tabodwè* the creeks become cart-tracks. The fish caught are *ngabat*, *ngayan*, *ngamwedo*, *ngasinyaing*, *ngapaungyo*, *ngapama*, *ngapè-aung*. Some are made into

whole-fish *ngapi*. Smaller fish are also made into *ngapi*. *Ngaku*, *ngagyi*, *ngabyema* and other air-breathers are caught with nets (*paik*) and *saung* for the manufacture of *ngapi*. The chief exports from Kawa and Thanatpin fisheries are *ngabat ngapi*, *ngaku ngapi*, *ngapiyegyo*, and *ngayangyauk*.

In Pegu township there are both wet and dry weather fisheries as well as some perennial ones, e.g., the Linga stream and its connected waters. The most valuable fish in the Linga fisheries are *ngathaing*, *ngagyi*, *ngamyinyin*, and *ngunuthan*. But after the Sittang made a new cut at Aðk, salt water got in and the fresh water fish either went upstream or crossed to the Seikkale fishery on the Shwegyin side and increased the value of that fishery. The rents of the Pegu fisheries affected have much decreased. Smoked *ngathaing* is an important export of the Linga fisheries. There are 40 or 50 dry weather fisheries between the Pagaing and Moyungyi bunds. In the Moyungyi bund are two sluices which are opened about *Tabodwè* to admit water to the Pegu-Sittang canal. This reduces the level of the water above the bund and enables the fisheries to be banded and baled. *Ngagyi*, *ngaku*, *ngabyema*, *ngapè-aung*, *ngayan*, etc., are caught. They are all mature fish of large size and fetch a good price, but as the time for working is short, it is difficult to bale out all the water. Early rains may cause loss to the lessee; in a good year the profits are large. The effect of the canal reservoir now being made remains to be seen. Near Thòngwa village at the junction of the Pagaing, Linga and Panut creeks is a pool called the Thòngwawingyi. Near by is a monastery where lives an influential monk. He has forbidden fishing in the pool and feeds the fish himself. They are very tame and intelligent; in the rains when the water is high they go off in search of food and return before the fishermen have erected their screens. The pool is very deep and some of the fish are said to be almost as big as a man.

In the Daik-u and Nyaunglebin townships all the above kinds of fisheries are found, and the methods are the same. In the Athawi, Ngagyi, and Tòkpyo fisheries in Nyaunglebin weeds are so thick that in some places a man can walk across them without sinking. The Nyaunglebin fisheries yield smoked *ngagyi* and *ngaku*. The Pazunnyaung fishery produces plenty of *ngathaing* which is not smoked but sold fresh.

The energy with which the fishery revenue has been pushed has caused some trouble, especially as the maps of fisheries etc., were very imperfect and the interests of the cultivators in some cases adversely affected.

The rate of capitation-tax is Rs. 5 for married and Rs. 2-8-0 for bachelor households. The collections on blank tickets are considerable, especially from raftsmen passing through. Capita-
tion-tax.

Other revenue, including stamps, income-tax, etc., calls for no remark. Owing to the large land, forest and excise revenues, the district is an important revenue-producing one. Other
revenue.

CHAPTER XI.

Local Self-Government and District Cess Fund.

The Pegu Municipality was constituted on the 1st of December 1883. The Municipal Committee consists of four *ex-officio* members—the Deputy Commissioner, the Civil Surgeon, the Executive Engineer and the Subdivisional Officer—and eleven elected members. The Municipality includes the civil station. In 1883 the population was a little over 10,000. In 1911 it was 17,104. A large area to the west of the town was added to the Municipality in 1885. The area of the town is 4.71 square miles or 3,014.40 acres. The area covered by buildings, which are somewhat scattered, aggregates 51 acres, on which are 204 houses. Two hundred and twenty-eight acres are house-sites; 301 acres garden; and 1,172 acres paddy land, of which 647 acres are within the old fort wall. Pegu
Municipality.

The revenue has risen from Rs. 50,000 in 1883 to Rs. 1,10,000.

The principal sources of revenue are—

	Rs.
Municipal rates and taxes	38,000
Market and slaughter-house	62,000
Cattle-pound fees	800
Hackney carriage fees	300
Rents and sale of land	3,700
Pawnshop license fees	1,500
Fines under Municipal and other Acts	700
Grants and contributions and miscellaneous	500
Total	1,07,500

A number of improvements has lately been carried out, including a large masonry bazaar with iron pillars and zinc roof, which cost three lakhs. A water-supply scheme is being carried out which will cost nearly four lakhs. In 1903-04 a trial tube well was sunk to a depth of 360 feet, but proved a failure. The Thèbyuchaung is now being dammed some 4 miles west of the town. The water will be brought down in pipes by gravitation, there being a head of 70 feet at the reservoir. The supply will be more than ample, being estimated at 30 gallons per head of population. There will be no house connection, but street water and fire-stand posts. The drainage of the town by masonry drains is under preparation by the Sanitary Engineer. A new hospital to cost nearly two lakhs has been sanctioned.

The town has improved in the last few years, a number of large masonry buildings having sprung up in the heart of the town, as well as other houses in the civil quarter. The town is extending west of the railway line, probably because of the railway line to Moulmein.

Nyaung-
lèbin
Town.

The Nyaunglehin Town Committee was constituted on the 20th June 1902. It consists of the Subdivisional Officer, the officer in charge of the Nyaunglehin Public Works Subdivision, the Township Officer, and the Sub-Assistant Surgeon (*ex-officio*) and three other members appointed by the Commissioner.

District
Cess
Fund.

District Cess Fund.—This is administered by the Deputy Commissioner. The principal sources of income are—

- (1) A cess of 10 per cent. on land revenue demand ;
- (2) Bazaars, ferries, slaughter-houses, cattle-pounds, etc.

The chief expenditure is on public works, including several important roads, and on education and hospitals. The total income is (1914) the largest in Burma, though the 10 per cent. cess is smaller than in some other districts.

CHAPTER XII.

Education.

Schools.

At the end of the year 1914-15 there were 237 Burmese schools on the register of aided schools with 8,455 boys and 4,434 girls in attendance. Private schools, chiefly monastic, numbered 350 with an attendance of 5,575 boys. Karen

registered schools numbered 71 with 1,342 boys and 698 girls in attendance. Karen private schools were 24 in number with 367 boys and 7 girls in attendance. The figures for Tamil schools were 3 registered schools with an attendance of 44 boys and 35 girls, 13 unregistered with an attendance of 141 boys and 23 girls.

In addition to these Vernacular schools there were seven Anglo-Vernacular schools registered, and one awaiting registration. The attendance at these eight schools amounted to 1,038 boys and 166 girls.

There are thus 706 schools of all kinds with 28,438 pupils. Of the 706 schools 59 are classed as secondary (including high schools), 260 as primary, and 387 as elementary (private schools). Of the 28,438 pupils 5,363 were girls. The number of pupils in 1903-04 was 18,361, of whom 3,705 were girls.

For purposes of inspection and administration the district is under the charge of the Inspector of Schools, Pegu Division, with headquarters at Rangoon. The Assistant Inspector of Schools takes a large share of the work of Vernacular inspection. There are also two Burman and one Karen Deputy Inspectors, and one Burman Sub-Inspector, who are in constant touch with the schools in their sub-circles. The Sub-Inspector has his headquarters at Nyaunglebin, the three Deputy Inspectors are stationed at Pegu.

The district is also a sub-circle of the Southern Circle, Karen Education.

The most important school in the district is the Government High School at Pegu, though it has on the rolls only just over half as many pupils as the newer Buddhist Anglo-Vernacular School. There is a Buddhist school at Nyaunglebin where both the American Baptists and the Roman Catholics have Anglo-Vernacular schools. The Baptist Mission School is for Karens; there is also an Independent Karen Anglo-Vernacular School at Padoplau. It will be seen that in Pegu district the people rely less on the Missions for Anglo-Vernacular education than formerly. The Missions have 360 pupils, the Buddhists 613, the Government School 231.

The Government School, Pegu, was taken over from the Municipality with effect from the 1st April 1908. The Buddhist school at Pegu was registered in January 1911, that at Nyaunglebin in November 1913. The Independent

Karen School at Padoplaw was registered in January 1915. Side by side with this transference of Anglo-Vernacular Education from Municipalities to Government and from foreign missions to indigenous societies is a growing tendency to substitute lay schools for monastic schools: though the exact figures for the two classes of schools are not readily available.

CHAPTER XIII.

Public Health.

Diseases. The district is unhealthy. Malaria, diseases of the respiratory and digestive organs, worms and skin disease are the most prevalent illnesses, and are due to a bad water supply. Each year there are outbreaks of small-pox and cholera in all parts of the district. Bawni fever is notorious, and other parts of the foothills are very feverish.

Vaccination is compulsory in Pegu town only. In the district the custom of vaccination is spreading, and the staff has been improved, but inoculation is not stamped out and is often the cause of infection. Prosecutions under the Act for the Prevention of Inoculation are sometimes necessary. The spread of vaccination is decreasing the cases of small-pox.

Cholera is bad in the very dry months when water is scarce and what can be got has to be drunk.

Plague appeared as an indigenous disease in Burma in 1905 and in Hlègu, then in this district, in the same year, and has ever since been bad in Pegu, Daik-u, Nyaunglèbin and other railway towns.

The proportion of insane persons is less than in any other district in the province, perhaps on account of the healthy Talaing blood. Deaf-mutes are also very few. Blindness and leprosy are slightly more common than in neighbouring districts.

Hospitals.

There is a Civil Surgeon at Pegu. The other hospitals and dispensary (pages 5 and 6, Volume B) are under sub-assistant surgeons. The forest hospital at Zaungtu for the benefit of forest employes is open in the dry weather only. There is a railway dispensary at Pyuntaza. A new hospital is projected in Pegu.

CHAPTER XIV.

Minor Articles.

Pegu is the old Talaing and Burmese capital and was visited by Cæsar Frederic. Its history is given in Chapter II. The present town lies on both banks of the Pegu river. There is a new bazaar on the east or left bank of the stream, near a large iron bridge which spans the river, erected in 1886-89. It was brought out from England for erection over the Kaladan at Akyab, but found to be too short and passed on to Pegu! Including freight from Akyab it cost Rs. 55,718. The court-house is further east and dates from 1883. On the same bank of the river are the Post Office and other public offices, and the small gaol built in 1909. On the east of the town is the huge Shwemawdaw pagoda. The new civil station is on the north-east of the town. Across the river is the railway station, and also a huge recumbent Buddha. The old moat and walls are still traceable. There is a Government Christian cemetery and other cemeteries are set apart for other religions. There is a Government Anglican church. There are two clubs, a golf links, a race-course, and a rifle range for the Railway Volunteers. The town is well provided with schools. It has a *dak*-bungalow and a circuit-house. There are European shops in the bazaar quarter.

Pegu
Town.

Pegu Subdivision.—There have been only minor changes in the subdivision as a whole since the district was made. It is bounded on three sides by the district boundaries and on the north roughly by the Pagaing bund and an administrative line continuing it westwards and northwards to the Tharrawaddy border. Twelve *kwins* north of the bund along the Sittang are also in the subdivision. It is usually in charge of a Burman Extra Assistant Commissioner.

Pegu
Sub-
division.

Thanatpin Township.—This township was formed in 1907 by cutting off parts of the Pegu and Kawa townships. It consists of a long strip of paddy land along the eastern boundary of the district, the old bed of the Sittang, from the Hanthawaddy border on the south to near Abya on the Moulmein railway line. It contains the Yitkangyi and Kamasè riverine forest reserves, and a considerable stretch of the Pegu-Sittang canal. It is bounded on the west by the Kawa and Pegu townships and on the north by the Pegu township. The sandbank area in the south-east is newly

Thanat-
pin
Town-
ship.

formed, and is now being eroded again on its eastern side (not on the north as might be expected) since the Sittang made a new cut at Alôk in 1910. The "Pegu Division Monthly Magazine," Public Works Department, gave the following interesting account of this change in the Sittang bed:—

"The rains of 1910 have chiefly been remarkable, so far as local interests are concerned, for having been instrumental in bringing about the Alôk cut-off. The way for this was prepared by the exceptional floods which were experienced in August 1909, and, indeed, it is not improbable that the flood of that period attained such extraordinary proportions, on account of the surplus waters of the Sittang being held up, through having to discharge themselves by so circuitous a route.

"The situation is practically this: the Sittang river, after passing Myitkyo lock, flows southwards, passing Môkpalin and Wimpadaw (the new and old entrances to the Sittang-Kyaikto canal respectively) to Alôk, whence it runs westwards and describes a long and circuitous course *via* Payabyo, Minywa, Kamasè, etc., coming round eventually to Punjabiywa and thence past Môkkam and Kyaikto to the sea. Now this course measured from Myitkyo to Kyaikto is about 75 miles in length; but the river in its meanderings forms an almost complete loop, the neck or narrowest part of which lies between Alôk and Punjabiywa, which are only 4 miles apart. Thus, if these points were connected the course of the river would be shortened by nearly 40 miles; and in the Alôk cut-off this is what the river is doing for itself.

"The manner in which this cut-off has come about is as follows:—There used in former years to be a shallow channel called the Alôk *chaung*, about 50 feet wide and 6 or 7 feet deep, which drained off the rainfall of the surrounding country into the river at Alôk. At the other end there was a small canal or drainage-cut called the Punjabi *chaung* which was excavated by the original Punjabi settlers (who give the village its name) to drain the adjoining paddy lands into the Sittang. Now the Sittang has been eroding its banks both at Alôk and Punjabiywa for some years. During the last ten years it has been cutting away on the Alôk side, at the rate of about 50 feet a year, and on the Punjabi side, about half a mile a year, and as this process has been going on, the two channels have been connected and on high tides could be traversed by small boats from end to end.

"Such was the state of affairs in 1908, when the distance from Alôk to Punjabiya was about 4 miles, the channel about 80 feet wide, 8 feet deep and the difference of water level about 4 feet. During 1909, we had the highest flood which has ever been known in the Sittang, and for a considerable length of time the whole face of the country in these parts was under water. The result was that the Alôk *chaung*, being the shortest route, took the most active part in the discharge of the flood waters, and thus became scoured out, and deep enough for water to flow down it, when the river stood at its ordinary level.

"Through communication now having been established, it was only a matter of time for the process to complete itself. The slope in the channel soon established a 'batt,' or fall in the bed level, at the Punjabiya end, and this, working itself backwards, by the process of retrogression of levels, had arrived within a couple of furlongs of the mouth at the Alôk end, by the month of January 1910. The channel was now about 200 feet wide, and about 12 feet deep; but the water in the Sittang, assuming its dry season level, was unable to flow through continuously and so matters remained much the same until the rains broke in May, only occasional tides finding their way through the short cut.

"Once the river rose again, however, the process was renewed with increased activity. Not only was there a swift current flowing continuously down the channel; but the action of the tides assisted. The flow tide first rushed violently up the narrow channel undermining the banks and loosening the earth and then retired as violently. Meanwhile, the tide flowing up the main channel had arrived some 4 or 5 hours later at Alôk, to find that the tide had ebbed at Punjabiya, and so the Alôk *chaung* received another flush out from its top end, which washed away all the loosened material dislodged by the flow tide. Under these conditions, the banks readily tumbled in and the bed rapidly scoured away. Alôk village, which was built along the original nullah, was hurriedly dismantled, and the inhabitants scattered themselves over the neighbouring villages. Punjabiya, finding itself threatened in front by the erosion of the Sittang and in the rear by this new danger, migrated to a securer site on the banks of the Kalan *chaung*. Trees, paddy fields, landmarks, etc., all in turn were absorbed by the widening channel. A small pagoda on which we had

established a Bench Mark suffered a like fate. In short the Alôk cut-off became an accomplished fact.

* * * *

"The Alôk *chaung* is now about 500 feet wide and of an average depth of 5 fathoms. The maximum depth obtained is 8 fathoms. The velocity is about 4 miles an hour while the tide is high, and 6 to 7 miles an hour when it is low.

"The formation of the channel from Alôk to Punjabiya is complete.

"It is quite free from all obstructions as far as Punjabi where the Kalaw or Shwelanbo *chaung* joins it. Thence to the Sittang is a distance of about three-fourths of a mile. The width of this portion is about two furlongs and it is obstructed with shoals and extensive sand banks, which render navigation difficult. There is however a well defined channel, in which the current is very strong; but by previously locating its position, it can nevertheless be navigated. Steam launches can travel up and down the entire length of the channel and boats frequently utilize it as a short cut, when proceeding down the river.

"As the distance from Alôk to Punjabi round the bend is about 40 miles, while the distance direct is only 4 miles, the cut-off forms a natural short cut, and this removes the *raison d'être* of the Sittang-Kyaikto canal, which itself accomplishes this purpose. The traffic of this canal used at one time to be quite flourishing, but the advent of the railway running alongside of it, took away much of its utility and under the present conditions its traffic will probably become even less than it has been in the past.

"The effects of this cut-off appear on the whole to be beneficial. It will probably induce changes at the mouth of the Sittang river and stop the erosion which has been taking place on the left bank, below Punjabi. This has been going on for some years and several miles of paddy land have been scoured away, while opposite to Môkkamu the Sittang is now within 700 feet of the Sittang-Kyaikto canal, which it threatens to demolish, if the action proceeds much further.

"The course of the river will also, probably, be redirected beyond Punjabiya from an easterly to a more southerly course.

"As regards the course of the river above Alôk, it is not unlikely that changes will occur here also, owing to the increased velocity which will be experienced, and the right bank of the river between Myitkyo and Môkpalin will

probably erode, though it is too early yet to predict what will actually occur.

"The cultivators of the areas above the cut-off hail the occurrence with joy, as the river can now discharge its surplus waters freely, and high and prolonged floods are no longer likely. This is particularly the case with regard to the area enclosed by the Sittang river, the Pegu and Sittang canal and the Pegu-Moulmein Railway, which has large patches of cultivation in places which were swamped out in former years."

It may be added that the Kyaikto canal has since been abandoned and that another cut-off through the sandbank area is now threatened. The south-east of the township is very badly off for water.

Thanatpin.—A notified town and the headquarters of the township. It is on the canal and has a bazaar and Public Works Department Inspection bungalow. There is good duck shooting on the lake. See also *Communications*.

Kalachaung.—A rising village, about 6 miles from the Sittang. No bazaar or bungalow.

Kamakaban.—On the Sittang, and about 4 miles from Waw. Has a police station.

Kamasè.—On the Thanatpin-Onhnè bridle path. There is a Police outpost here, and the village is a centre for the paddy trade.

Minywa.—On the canal. There is a branch Post Office and a Public Works Department bungalow. A fishing centre with a small fish and vegetable bazaar. The site of a weir on the canal.

Waw.—A rail, road and canal centre, containing a bungalow and some rice mills.

Yitkangyi.—A large village with a police outpost.

Pegu Township.—This township consists of the hill Pegu forest on the upper waters of the Pegu river, and extends eastwards across the railway to the Sittang. It thus stretches across the district, and is bounded on the north by the Nyaunglebin subdivision and on the south by the Kawa and Thanatpin townships. Except along the Sittang the land is not rich, and a large part of it is forest reserve. It also contains the Pyinbongyi lake, about 40 square miles in extent, and other large flooded areas in the east. It has many large and ancient pagodas and other historical remains including some old forts or *myos*.

Kamanat.—On the Pegu-Thanatpin road, about two miles from Pegu.

Myitkya.—At the head of the Pegu-Sittang canal. It has a lock leading from the Sittang. Launches ply from here along the canal and the Sittang; people can thus get into Pegu and back *via* Waw railway station in a day. The Pagaing bund starts from here. There are military and civil police, a post and telegraph office, a hospital and a bungalow.

Payagale.—The old headquarters of the township, but now an ordinary village with a police station. There is a railway station here.

Payagyi.—A notified railway town with a bungalow. The pagoda is one of a line of pagodas along the old *minlan*. It was built by Nga Ga Yu, son of a minister of one of the early Peguan kings. It contains some inscriptions. The village is a road centre.

Pyinbongyi.—A large village noted for its duck shooting. The station is an important one for paddy export. There is a Public Works Department bungalow.

Tandawgyi.—A prosperous village up the Pegu river, with a good bungalow. One of the old 32 towns of Hanthawaddy.

Wunbè.—Near Kyatkôn railway station. An agricultural village.

Zaungtu.—A prosperous timber trading village up the Pegu river. Pegu is said to have been founded from here. This is the loose local tradition. Zaungtu was probably the seat of a local chief before Pegu was founded. (See Chapter II.) There is a large forest bungalow here and a hospital, etc. Zaungtu is one of the 32 towns of Hanthawaddy.

Kawa
Town-
ship.

Kawa Township.—This township is a fairly compact triangle in the south of the district astride the Pegu river, bounded on the west by the Insein district, on the south by the Hanthawaddy district, and on the north-east by the Pegu and Thanatpin townships. The east of the township is rich, especially about Ohnè, but the well water is brackish and tanks have had to be built to maintain a supply.

Kawa.—On the left bank of the Pegu river. A notified town with civil and military police, district bungalow, hospital, post and telegraph office, etc. It is $1\frac{1}{4}$ miles from Tongyi railway station where there is a bazaar.

Kyatkpadaingyi.—On the canal, about two miles from Tawa lock.

Kyauktan.—On the railway and Pegu river. Has a district bungalow and police outpost. No bazaar, but there are roadside stalls.

Môkkainggyi.—On the *chaung* of the same name, which is navigable in the rains.

Neikban.—On the *Ônhnè chaung*, which is navigable in the rains, and about three miles from Ôhnè and from Môkkainggyi.

Ônhnè.—On the bridle path from Kawa to Thanatpin, eight miles from Kawa. Well known for its big and substantial houses. Has a Public Works Department bungalow and post and telegraph office.

Paingkyôn.—On the creek of the same name, about two miles from Palè and from Neikban.

Pale.—On the bridle path half way between Kawa and Ônhnè. Has a bungalow and a small bazaar. A big pagoda is being built there.

Tawa Lock.—On opposite banks of the Pegu river. Tawa. Tawa lock is an important junction of communications. The lock is the exit of the canal, and is crowded with traffic in the season, so much so that some paddy is railed from Wâw. Tawa railway station is on the other or west bank of the river. At Tawa lock there is a bazaar and also a bungalow.

Thetkala.—On the *chaung* of the same name. There is a daily motor boat service between this village and Kawa during the greater part of the rains.

Nyaunglebin Subdivision.—(See Chapter I.) The subdivision is usually in charge of an Assistant Commissioner. It is bounded on the south by the Pegu subdivision, and on the other three sides by the district boundaries. On the whole a rich subdivision but extensively flooded in the south-east.

Nyaung-
lebin Sub-
division.

Nyaunglebin.—A notified urban area and the second largest town in the district. It is on the main railway line, and has a circuit house and a Public Works Department bungalow. There is a bazaar and a hospital. It is managed by a Town Committee. It is a large paddy-exporting centre and contains three rice mills. It also has schools, Christian Missions, etc.

Daik-u Township.—The more southerly of the two townships in the subdivision. Formerly called Pyuntaza, see Chapter I.

Daik-u
Town-
ship.

Daik-u.—A growing town on the railway, flooded and unsavoury in the rains. It has civil and military police and a market. There are several Vernacular and a Methodist Anglo-Vernacular school. It is a notified railway town. Has an inspection bungalow.

Dayèmi.—A village, adjoining Daik-u. Its inhabitants are gradually emigrating to Daik-u.

Èingyelesè.—A fairly large village, about $1\frac{1}{2}$ miles south of Daik-u, inhabited by Burmans and Karens. Has a Vernacular Buddhist and a Christian school.

Nyaungbhintha.—Now amalgamated with Paungdawthi. Contains a few Shans.

Nyaunggan.—Now amalgamated with Sabachôn. Contains many Upper Burmans. About 8 miles from Daik-u.

Pa-aungwè.—A well laid out village adjoining and larger than Daik-u. It is older than Daik-u and contains some well built houses with gardens.

Paungdawthi.—A growing town on the railway, with bazaar and post office.

Pyuntasa.—On the railway, with a fine railway station. Formerly the township and earlier still the subdivisional headquarters. Flooded in the rains. Has a bazaar, post and telegraph office, and a Public Works Department bungalow. An important railway centre.

Shwe-indôn.—A village about two miles from Daik-u inhabited by Burmans and Karens, many of whom are Christians. There is a Christian school.

Nyaung-
lebin
Town-
ship.

Nyaunglebin Township.—In the north of the district. More protected from floods than Daik-u owing to the Sittang bund.

Kyauktaga.—On the railway, and notified as a railway town. Has a hospital, bazaar, bungalow, and post and telegraph office.

Pado.—A Karen Christian village 8 miles west of the railway. There are Roman Catholic Mission and American Baptist Mission churches, the latter a fine building put up by U Paik San.

Peinzalôh.—On the railway, a notified railway town. Has a police station and a bazaar, also a bungalow. There is a fine brick *kyauung* erected by U Myat Tun Aung.

Pènwègôn.—A notified railway town, with a bazaar, post office, police station and Public Works Department bungalow.

Tawwi.—On the railway.

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